CITY OF CARDIFF.

ANNUAL REPORT

FOR 1916

OF THE

MEDICAL OFFICER OF HEALTH.

EDWARD WALFORD, M.D., D.P.H., F.R.MET.SOC.,

MEDICAL OFFICER OF HEALTH, CITY AND PORT OF CARDIFF;
SCHOOL MEDICAL OFFICER, CARDIFF EDUCATION AUTHORITY.

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CARDIFF:
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CITY OF CARDIFF.

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CITY OF CARDIFF.

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Assistant Medical Officer of Health:

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*O. W. FUDGE.
†A. E. BRAIN.

* Cert. Royal San. Inst. ‡ Cert. Health Visitor and School Nurse Royal San. Inst.
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CITY OF CARDIFF.

CITY HALL,

CARDIFF,

June, 1917.

To the Right Honourable The Lord Mayor, Aldermen and Members of the City Council of Cardiff.

MY LORD MAYOR AND GENTLEMEN,

The Annual Report for 1916, which I have the honour of presenting to you, has been considerably reduced in volume. The conditions which rendered this reduction necessary in the case of the Report for 1915 unfortunately still continue. All the members of the permanent Staff of the Medical Officer of Health of military age and fit for Military Service have been called up for this service and in some cases their places have been temporarily filled, the result being that the routine work of the Department, especially the clerical work, has been carried on under difficulties. The Local Government Board have issued circular letters in which they suggest the omission of many details usually inserted in Annual Reports, and in which they state that, having regard to the necessity for strict economy in the use of paper and in demands on printing establishments, interim reports only should be made for the year 1916. In these circumstances this Report will contain only a brief account of the routine administrative work and an abbreviated statistical record.

The members of the Staff absent on Military duty comprise one of the Assistant Medical Officers, five Sanitary Inspectors, one Health Visitor, four Clerks, and Van Driver.

As a result a temporary re-arrangement of the duties of the remaining members of the Staff was necessitated, and temporary appointments of four Clerks were made.

TABLE I.

The following Table gives the number of houses in each Municipal Ward in Cardiff, as shown by the enumeration made in June, 1916, by the Inspectors in the Department of the Medical Officer of Health :—

Municipal Wards.	Dwelling houses, including Business Premises.				Lock-up Shops		Houses being Built.	Totals.
	Inhabited.	Occupied for Business Purposes only.	Vacant Houses.		Occupied	Vacant.		
			Number	Per Cent.				
Central	1,799	397	63	3·3	317	12	...	2,588
South	1,604	226	20	1·2	27	1	1	1,879
Cathays	4,251	23	26	0·6	18	3	3	4,324
Adamsdown... ...	1,965	41	17	0·8	8	...	...	2,031
Riverside	3,135	55	29	0·9	19	8	...	3,246
Canton	4,856	30	34	0·6	10	1	14	4,945
Grangetown ..	3,790	25	13	0·3	6	...	12	3,846
Roath	3,794	29	34	0·8	11	4	17	3,889
Park	4,644	80	42	0·8	22	7	5	4,800
Splott	3,110	29	8	0·2	5	...	4.	3,156
TOTALS ...	32,948	935	286	0·8	443	36	56	34,704

VITAL STATISTICS.—The statistics in this report are based upon the Registrar General's estimate of the civil population of Cardiff for the middle of the year 1916, *i.e.*, 184,900. The population of the City enumerated at the Census of April, 1911, amounted to 182,259, being an increase of 17,926 over the census of 1901 (164,333). The increase in the population of the whole City during the ten years ended 31st March, 1911, was at the rate of 10·9 per cent. The excess of births over deaths during this period. was 25,031. The number of births amounted to 50,853, and the deaths to 25,822, but the actual increase in the population according to the census returns was 17,926, or a difference of 7,105. This would imply a considerable migration of population from the City to the adjoining districts during the period in question.

The following is a Summary of the Vital Statistics for the year 1916 :—

Estimated Civil Population ... 184,900

Births	4,375	Birth-rate per 1.000	23·6
Deaths	2,546	Death-rate per 1,000	13·7
Deaths under 1 year	392	Deaths under 1 year per 1,000 births	89

TABLE II.

Table showing the number of deaths and death-rates per 1,000 from Zymotic, Respiratory and Tuberculous Diseases during the year 1916, compared with the average annual death-rates from these diseases during the preceding ten years (1906–1915) :—

Cause of Death	Number of Deaths	Death-rate per 1,000	Death-rate per 1,000, 1906-1915 (average)
Small-pox	3	0·01	0·01
Measles	20	0·10	0·29
Scarlet Fever	6	0·03	0·06
Diphtheria	34	0·18	0·15
Enteric Fever	5	0·02	0·04
Whooping Cough	28	0·15	0·24
Respiratory Diseases	415	2·24	2·15
Pulmonary Tuberculosis	255	1·37	1·21
Other Tuberculous Diseases	91	0·49	0·42

TABLE III.

Deaths and death-rate per 1,000 births from Diarrhœa and Enteritis (under 2 years) :—

	Number of Deaths	Death-rate per 1,000 births	Death-rate per 1000 births, 1906-1915 (average)
Diarrhœa and Enteritis (under 2 years) ...	72	16·4	21·7

TABLE IV.

Table showing the birth-rate and death-rate per 1,000 persons living, and rate of infant mortality in 1916, compared with the rates in 1915, the average rates for the ten years 1906–1915 in Cardiff, and the rates during the year 1916 in England and Wales and the 96 great towns :—

	Period	Birth-rate	Death-rate	Deaths under one year per 1,000 births
Cardiff	1916	23·6	13·7	89
Cardiff	1915	24·6	14·8	106
Cardiff	1906-1915	25·6	13·6	117
England and Wales	1916	21·6	14·0	91
96 Great Towns	1916	23.3	14·4	99

MARRIAGES.—The return of the number of marriages in the City of Cardiff during the years 1904–1916, with the rate of persons married per 1,000 of the population, is given below :—

TABLE V.

YEAR.	MARRIAGES.	RATE OF PERSONS MARRIED PER 1,000 living
1904	1,563	17·7
1905	1,650	18·8
1906	1,769	19·2
1907	1,743	18·5
1908	1,759	18·3
1909	1,803	18·4
1910	1,728	17·3
1911	1,646	18·0
1912	1,938	20·9
1913	1,976	21·1
1914	2,225	23·6
1915	2,401	25·4
1916	1,825	19·7

BIRTHS.—During the year 1916 the births registered in the City numbered 4,375 ; of these, 2,196 were males and 2,179 were females. The number of births corresponded to an annual birth-rate of 23·6 per 1,000 persons living. During the ten years ended 1891, the birth-rate in Cardiff averaged 39·9 per 1,000, as compared with 25·6, the average rate during the years 1906-1915.

The following table gives the annual number of births and the birth-rates in Cardiff in periods since 1852, from which it will be seen that a considerable decline in this rate has taken place during recent years.

TABLE VI.

Period.	Number of Births.		Birth-rate per 1,000.	
1852–1861	1,144	Average	44·2	Average
1862–1871	1,364		37·7	
1872–1881	2,433		36·5	
1882–1891	4,166		39·9	
1892–1901	5,241		35·3	
1902–1911	5,049		28·9	
1912	4,597		24·9	
1913	4,900		26·2	
1914	4,783		25·3	
1915	4,645		24·6	
1916	4,375		23·6	

TABLE VII.

Showing the number of legitimate and illegitimate births, male and female, in each municipal ward during the year 1916 :—

Municipal Wards.	Legitimate.		Illegitimate.		Totals.		TOTALS.
	Males.	Females.	Males.	Females.	Males.	Females.	
Central	81	77	3	4	84	81	165
South	141	134	7	3	148	137	285
Cathays	261	267	13	8	274	275	549
Adamsdown ...	154	149	14	18	168	167	335
Riverside	150	157	16	27	166	184	350
Canton	313	283	8	13	321	296	617
Grangetown ...	330	345	4	10	334	355	689
Roath	177	219	11	14	188	233	421
Park	232	194	9	8	241	202	443
Splott	266	240	6	9	272	249	521
Totals ...	2,105	2,065	91	114	2,196	2,179	4,375

DEATHS.—The total number of deaths registered at all ages and from all causes in the City of Cardiff during the year 1916 amounted to 2,609, including non-residents who died within the district. If corrected by the subtraction of non-residents who died in public institutions in Cardiff, and by the addition of residents who died in institutions outside the City, the number is 2,546, corresponding to an annual death-rate of 13·7.

From Table VIII. it will be seen that a continuous decline in the death-rate has taken place since these rates were first recorded in 1852–1861, when the mean rate for the ten years reached 29·2 per 1,000.

The death-rate throughout the country as compared with that of Cardiff for the year 1916 is given below :—

	Death-rate per 1,000 persons living.
England and Wales	14·0
96 Great Towns	14·4
148 Smaller Towns	13·0
CARDIFF	13·7

TABLE VIII.

The following table gives the vital statistics in periods since 1852, and shows the marked decline in the general death-rate, in the death-rate from zymotic diseases, and in the birth-rate in successive periods :—

Years	Population	Births	Birth-rate per 1,000	Deaths	Death-rate per 1,000	Deaths from Zymotic Diseases	Zymotic Death-rate per 1,000
1852—1861 ...	25,889	1,144	44·2	756	29·2	222	8·58
1862—1871 ...	36,152	1,364	37·7	875	24·2	167	4·62
1872—1881 ...	66,639	2,433	36·5	1,335	20·0	218	3·27
1882—1891 ...	104,420	4,166	39·9	2,255	21·6	347	3·32
1892—1901 ...	148,606	5,241	35·3	2,674	18·0	355	2·39
1902—1911 ...	174,490	5,049	28·9	2,597	14·8	286	1·63
1912	184,633	4,597	24·9	2,563	13·9	362	1·96
1913	186,554	4,900	26·2	2,567	13·7	258	1·38
1914	188,495	4,783	25·3	2,644	14·0	314	1·66
1915	188,495	4,645	24·6	2,808	14·8	233	1·23
1916	184,900 (Civil)	4,375	23·6	2,546	13·7	171	0·92

Means. Means. Means. Means. Means. Means.

TABLE IX.

Showing the number of deaths and death-rates at various age periods during the last six years :—

Ages.	Number of Deaths.						Death-rate per 1,000 persons living at each age group.					
	1911	1912	1913	1914	1915	1916	1911	1912	1913	1914	1915	1916
Under 5 years	837	851	761	793	742	582	36·3	36·9	36·9	38·1	35·6	27·9
5 to 15 ,,	104	100	104	113	130	111	2·6	2·5	2·6	2·8	3·2	2·8
15 ,, 25 ,,	105	127	134	132	142	153	2·9	3·5	3·7	3·6	3·9	4·2
25 ,, 65 ,,	947	946	969	993	1,060	979	12·1	12·0	11·5	11·7	12·4	11·5
65 years and upwards ...	601	539	599	613	734	721	111·4	99·9	84·2	85·1	101·9	100·1
At all Ages ...	2,594	2,563	2,567	2,644	2,808	2,546	14·1	13·9	13·7	14·0	14·8	13·7

TABLE X.

Death-rates from all causes per 1,000 persons living in the several municipal wards, the highest rate in each year being underlined :—

	1907	1908	1909	1910	1911	1912	1913	1914	1915	1916
Cardiff (Whole District) ...	16·0	14·3	14·2	13·0	14·1	13·9	13·7	14·0	14·8	13·7
Roath Ward	11·9	10·7	11·3	11·9	13·0	12·8	9·5	10·4	12·3	11·1
Park Ward	9·9	8·9	8·9	9·3	12·4	11·9	10·8	11·7	12·5	11·1
Splott ,, ...	13·7	13·2	10·7	12·9	12·9	14·0	14·2	17·8	14·1	10·3
Central ,, ...	15·2	12·8	13·0	20·4	22·1	21·0	19·4	22·9	21·8	22·4
South ,, ...	17·1	15·4	14·3	18·3	21·4	19·1	21·2	22·6	17·9	23·9
Cathays ,, ...	11·1	10·0	9·3	10·5	12·3	12·6	13·3	10·9	13·4	11·4
Adamsdown Ward ...	20·3	15·7	17·2	14·9	16·3	16·3	16·6	15·7	18·0	16·9
Riverside ,, ...	10·1	10·7	10·8	13·6	12·6	10·6	12·1	11·5	13·9	12·8
Canton ,, ...	10·4	10·3	10·0	10·7	12·7	12·9	12·0	12·9	12·8	10·8
Grangetown ,, ...	17·0	14·0	14·0	14·0	14·2	15·6	15·3	13·8	15·7	13·3

TABLE XI.—Analysis of Births and Deaths in the City of Cardiff, in Registration Sub-Districts, and in Municipal Wards, during the year 1916.

LOCALITIES	*Population (Civil)	Area in Acres (Land and Inland Water)	Persons per Acre	Births		Deaths		Deaths under 1 Year		Seven Principal Zymotic Diseases	Principal Zymotic Diseases.														Phthisis, Pulmonary Tuberculosis		Other Tuberculous Diseases.		Respiratory Diseases	
											Small-pox		Measles		Scarlet Fever		Whooping Cough		Diphtheria		Typhoid Fever		Diarrhœa							
				Number	Birth-rate	Number	Death-rate	Number	Number per Births	Number	Death-rate	Deaths	Death-rate	Deaths	Death-rate	Deaths	Death-rate	Deaths	Death-rate	Deaths	Death-rate	Deaths	Death-rate	Deaths	Death-rate	Deaths	Death-rate	Deaths	Death-rate	Deaths	Death-rate
City of Cardiff ...	184,900	6,373	29	4,375	23·6	2,546	13·7	392	89	171	0·92	3	0·01	20	0·10	6	0·03	28	0·15	34	0·18	5	0·02	75	0·40	255	1·37	91	0·49	415	2·24
East Cardiff Registration Sub-Districts. — Roath Ward ...	22,206	...	...	421	18·9	248	11·1	43	102	26	1·17	1	0·04	...	...	2	0·09	8	0·36	4	0·18	...	...	11	0·49	16	0·72	7	0·31	38	1·71
East Cardiff Registration Sub-Districts. — Park Ward ...	24,237	...	...	443	18·2	270	11·1	31	69	10	0·41	...	...	3	0·12	1	0·04	1	0·04	...	...	...	...	5	0·20	33	1·36	9	0·37	36	1·48
East Cardiff Registration Sub-Districts. — Splott Ward ...	19,049	...	...	521	27·3	198	10·3	42	80	18	0·94	1	0·05	...	...	...	...	1	0·05	5	0·26	1	0·05	10	0·52	21	1·10	12	0·62	33	1·73
East Cardiff	65,492	481	136	1,385	21·1	716	10·9	116	83	54	0·82	2	0·03	3	0·04	3	0·04	10	0·15	9	0·13	1	0·01	26	0·39	70	1·06	28	0·42	107	1·63
Central Cardiff Registration Sub-Districts. — Central Ward ...	10,927	...	...	165	15·1	245	22·4	35	212	15	1·37	1	0·09	1	0·09	...	...	1	0·09	4	0·36	...	...	8	0·73	41	3·75	6	0·54	41	3·75
Central Cardiff Registration Sub-Districts. — South Ward ...	10,155	...	...	285	28·0	243	23·9	27	94	9	0·88	...	...	3	0·29	...	...	2	0·19	2	0·19	...	...	1	0·09	29	2·85	8	0·78	51	5·02
Central Cardiff Registration Sub-Districts. — Cathays Ward ...	24,001	...	...	549	22·8	274	11·4	46	83	26	1·08	...	...	4	0·16	...	...	5	0·20	4	0·16	2	0·08	11	0·45	30	1·24	11	0·45	48	1·99
Central Cardiff Registration Sub-Districts. — Adamsdown Ward	13,488	...	...	334	24·7	228	16·9	41	122	21	1·55	...	...	3	0·22	2	0·14	4	0·29	4	0·29	1	0·07	8	0·59	19	1·40	9	0·59	29	2·15
Central Cardiff ...	58,571	3,832	15	1,333	22·7	990	16·9	149	111	71	1·21	1	0·01	11	0·18	2	0·03	12	0·20	14	0·23	3	0·05	28	0·47	119	2·03	34	0·58	169	2·88
West Cardiff Registration Sub-Districts. — Riverside Ward...	18,311	...	...	351	19·1	235	12·8	26	74	10	0·54	...	...	2	0·10	...	...	1	0·05	2	0·10	...	...	5	0·27	15	0·81	3	0·16	38	2·07
West Cardiff Registration Sub-Districts. — Canton Ward ...	26,057	...	...	617	23·6	282	10·8	32	51	7	0·26	...	...	...	...	...	...	...	...	3	0·11	1	0·03	3	0·11	18	0·69	10	0·38	41	1·57
West Cardiff Registration Sub-Districts. — Grangetown Ward	24,108	...	...	689	28·5	323	13·3	69	100	29	1·20	...	...	4	0·16	1	0·04	5	0·20	6	0·24	...	...	13	0·53	33	1·36	16	0·66	60	2·48
West Cardiff	68,476	2,060	33	1,657	24·1	840	12·2	127	76	46	0·67	...	...	6	0·08	1	0·01	6	0·08	11	0·16	1	0·01	21	0·30	66	0·96	29	0·42	139	2·02

* The civil population of the whole city is that estimated by the Registrar-General, and the populations of the Registration Sub-districts and of the Municipal Wards are estimated on the basis of the number of inhabited houses in June, 1916.

INFECTIOUS DISEASES.—The 2,546 deaths from all causes included 171 from the principal infectious diseases. This number was equal to an inclusive death-rate from these diseases of 0·92 per 1,000 persons living, as compared with 1·23 the rate in 1915, and with 1·44 the average rate for the ten years 1906–1915.

The mortality from these diseases in Cardiff was distributed in each quarter of the year 1916 as follows :—

	First Quarter.	Second Quarter.	Third Quarter.	Fourth Quarter.
Small-Pox	1	2	—	—
Measles	13	5	1	1
Scarlet Fever	2	2	1	1
Diphtheria	8	5	9	12
Enteric Fever	—	1	2	2
Whooping Cough ...	10	9	3	6
Diarrhœa	6	4	47	18

In the Registration Sub-Districts, the mortality during 1916 from these diseases was as follows :—

	No. of Deaths.	Death-rate per 1,000
East Cardiff	54	0·82
Central ,, ...	71	1·21
West ,, ...	46	0·67

TABLE XII.

Death-rates from Infectious Diseases per 1.000 persons living in Cardiff :—

	1891-1900	1901-1910	1911	1912	1913	1914	1915	1916
Small-Pox	0·01	0·00	0·00	0·00	0·00	0·00	0·00	0·01
Measles	0·42	0·34	0·03	1·09	0·05	0·32	0·19	0·10
Scarlet Fever ...	0·17	0·10	0·08	0·04	0·09	0·10	0·05	0·03
Diphtheria	0·47	0·20	0·20	0·17	0·22	0·22	0·23	0·18
Whooping Cough ...	0·48	0·31	0·29	0·29	0·09	0·38	0·18	0·15
Enteric Fever ...	0·14	0·05	0·29	0·08	0·03	0·06	0·01	0·02
Diarrhœa	0·91	0·50	0·03	0·27	0·89	0·56	0·55	0·40

TABLE XIII.

The following table shows the number of cases of infectious disease notified in the City of Cardiff in each year since the adoption of the Infectious Disease (Notification) Act, 1889 :—

Year.	Small-Pox.	Diphtheria (including Membranous Croup).	Scarlet Fever.	Enteric Fever.	Typhus Fever.	Erysipelas.	Puerperal Fever.	Continued Fever.	Pulmonary Tuberculosis.	Other Forms of Tuberculosis	Totals.
1890	—	72	335	150	—	45	4	2	—	-	608
1891	9	70	658	130	—	52	10	—	—	—	956
1892	5	164	1,851	118	—	95	12	3	—	—	2,248
1893	4	479	816	103	41	152	24	2	—	—	1,621
1894	10	343	577	62	1	135	19	3	—	—	1,150
1895	1	248	484	79	—	132	17	5	—	—	966
1896	45	306	874	74	1	134	21	7	—	—	1,462
1897	7	516	758	117	—	163	12	7	—	—	1,580
1898	—	960	332	80	—	133	18	6	—	—	1,529
1899	—	640	184	94	—	176	13	8	—	—	1,115
1900	4	714	383	95	4	106	15	5	—	—	1,326
1901	8	734	1,362	73	—	152	16	3	—	—	2,348
1902	2	701	1,433	69	—	169	13	7	—	—	2,394
1903	65	438	963	100	6	145	20	5	—	—	1,742
1904	11	406	658	40	—	112	12	2	—	—	1,241
1905	24	327	362	39	—	133	14	3	—	—	902
1906	2	333	776	77	—	117	17	1	—	—	1,323
1907	16	304	950	62	—	147	16	—	—	—	1,495
1908	—	291	475	55	—	167	15	1	—	—	1,004
1909	2	283	616	46	—	132	6	2	—	—	1,087
1910	1	363	887	36	—	137	8	—	346	—	1,778
1911	—	491	753	44	—	127	8	—	366	—	1,789
1912	—	536	472	56	—	170	11	—	499	—	1,744
1913	3	558	902	27	—	145	8	—	520	166	2,329
1914	3	620	1,086	29	—	125	11	—	353	81	2,308
1915	—	469	751	20	—	100	12	1	368	102	1,823
1916	51	384	478	26	—	90	9	1	372	141	1,551

CARDIFF SANATORIUM.

Report of the Medical Superintendent for the year 1916.

	0 to 5 years.	5 to 15 years.	15 to 25 years.	25 to 35 years.	35 to 45 years.	45 to 55 years	55 to 65 years.	Totals.
Remaining in Hospital 1st Jan., 1916 :—								
Scarlet Fever	28	61	8	1	1	...	...	99
Diphtheria	9	11	4	4	...	...	...	28
Enteric Fever	...	...	14	5	...	...	...	19
Other Diseases	...	...	...	1	...	...	...	1
Totals	37	72	26	11	1	...	...	147
Admitted during the year 1916 :—								
Scarlet Fever	120	246	35	14	1	...	...	416
Diphtheria	61	170	41	13	2	...	...	287
Enteric Fever	...	3	28	14	5	2	...	52
Small Pox	5	10	9	7	12	6	1	50
Other Diseases	2	4	6	5	1	...	...	18
Totals	188	433	119	53	21	8	1	823
Totals under treatment in 1916	225	505	145	64	22	8	1	970
Of the above there were discharged :—								
(*a*) Recovered :—								
Scarlet Fever	128	287	40	14	2	...	...	471
Diphtheria	54	156	40	14	1	...	...	269
Enteric Fever	...	3	36	18	4	2	...	63
Small Pox	4	9	8	7	12	6	1	47
Other Diseases	...	...	5	3	1	...	...	9
Totals	186	455	133	56	20	8	1	859
(*b*) Died :—								
Scarlet Fever	5	1	...	...	...	...	...	6
Diphtheria	6	10	...	...	...	...	...	16
Enteric Fever	...	...	2	1	...	...	...	3
Small Pox...	1	1	1	...	...	...	...	3
Other Diseases	3	3	2	2	...	...	...	10
Totals	15	15	5	3	...	...	...	38
Remaining in Hospital 31st Dec., 1916 :—								
Scarlet Fever	15	19	3	1	...	...	...	38
Diphtheria	10	15	1	3	1	...	...	30
Enteric Fever	...	...	4	...	1	...	...	5
Other Diseases	...	...	...	...	...	...	...	...
Totals	25	34	8	4	2	...	...	73
Totals under treatment in 1916 ...	226	504	146	63	22	8	1	970

Mortality per cent. under treatment :—

Scarlet Fever ...	1·16	Small Pox	6·00
Diphtheria	5·08	Other Diseases ...	52·6
Enteric Fever ...	4·22		

B. W. BROAD, M.B., *Medical Superintendent.*

SMALL-POX.—There were 51 cases of Small-Pox during the year.

Death-rate from small-pox in Cardiff since the year 1875 :—

YEARS.	DEATH-RATE PER 1,000
1875–1880	0·01
1881–1890	0·03
1891–1900	0·01
1901–1911	0·00
1912	0·00
1913	0·00
1914	0·00
1915	0·00
1916	0.01

I am indebted to the Vaccination Officer for the following return of vaccinations within the City during the years 1906–1916 :—

TABLE XIV.

Year.	Successfully Vaccinated.	Insusceptible.	Postponed.	Certificates of Exemption and Statutory Declarations.	Died Unvaccinated.	Unaccounted for and left the town.
1906	3,475	20	101	76	525	810
1907	2,804	13	87	89	418	1,843
1908	3,183	20	87	429	466	894
1909	3,066	18	35	545	369	1,012
1910	2,784	11	69	683	380	597
1911	2,107	25	83	745	416	466
1912	2,718	14	28	1,041	369	230
1913	2,487	12	30	938	362	292
1914	2,398	32	30	1,123	458	281
1915	2,390	14	56	1,201	437	184
1916	3,292	10	52	930	447	168

During the year an outbreak of Small Pox occurred, originating in the neighbourhood of the Docks and Seamen's Lodging Houses. Between the 1st February and the 6th June, 51 cases of this disease came to the knowledge of the Health Department, all of which were dealt with in the usual way by hospital isolation, vaccination and re-vaccination of the known contacts, and the ordinary administrative measures applicable to such an outbreak. Three out of the 51 cases proved fatal, a rate of mortality rather below the average, as will be seen from the attached Table of cases and deaths during the years 1900–1916, in which the average case fatality reached 7·4 per cent.

TABLE XV.

SMALL-POX—CARDIFF. 1900 TO 1916.

Years.	Cases.	Deaths.	Vaccinated in Infancy.	Unvaccinated.
1900	4	2	2	...
1901	8	1	...	1
1902	2	...	...	...
1903	65	3	3	...
1904	11	1	...	1
1905	24	...	...	...
1906	10	2	...	2
1907	15	1	1	...
1908	...	...	...	...
1909	3	1	...	1
1910	1	1	1	...
1911	...	...	...	...
1912	...	...	...	...
1913	3	...	...	...
1914	3	...	...	...
1915	1	...	...	1
1916	51	3	...	3
Total ...	201	15	7	9

Total Mortality ... ... 7·4 per cent.

The 3 deaths referred to occurred amongst the 6 unvaccinated persons attacked, a fact of some significance in view of the increasing numbers who claim exemption from vaccination on conscientious grounds.

The following Table gives the number of cases and deaths amongst the vaccinated and unvaccinated respectively.

TABLE XVI.

SMALL-POX—CARDIFF. 1st February, 1916—6th June, 1916.

AGES. YEARS.	Unvaccinated.				Vaccinated in Infancy only.				Vaccinated after Contact.				Re-vaccinated after Contact.			
	Cases		Deaths		Cases		Deaths		Cases		Deaths		Cases		Deaths	
	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.
0– 5	1	...	1	...	...	...	...	...	...	3	...	...	...	...	...	...
5–10	...	1	...	...	1	1	...	...	1	3	...	...	...	...	...	...
10–15	1	1	1	...	...	1	...	...	...	...	...	...	1	...	...	...
15–20	...	1	...	1	1	2	...	...	...	...	...	...	1	2	...	...
20–25	...	1	...	...	...	...	...	...	...	...	...	...	1	1	...	...
25–50	...	...	...	...	10	9	...	...	1	2	...	...	...	...	...	...
50 years & upwards	...	...	...	...	3	1	...	...	...	...	...	...	...	...	...	...
Total	2	4	2	1	15	14	...	...	2	8	...	...	3	3	...	...

Generally it has been possible to isolate in hospital without delay, cases of small-pox imported by shipping and the disease has seldom spread from this source, but in connection with the outbreak under consideration although the first cases discovered occurred in a street off Bute Street much frequented by seamen, no trace of any imported infection could be found, but it is probable that this was introduced into the port by some undiscovered convalescent seaman from abroad. The infection, which was at first confined to the original centre in the streets near the Docks, soon spread to other parts of the town, although with one exception it was entirely restricted to houses situated on the East side of the River Taff.

The first case of small-pox to which the attention of the Medical Officer of Health was called was on the 2nd February—a woman, E. D., aged 22 years, residing at 3, North Church Street, off Bute Street. This person was found to be suffering from small-pox with a well developed rash, confluent on the face, the onset of the illness dating from the 26th January. It was at first suspected that she was infected during a voyage from Egypt, but it was found on enquiry that she arrived in Cardiff on the 7th January, and that no case of small-pox had occurred on board the steamer which conveyed her to England. In these circumstances the source of infection was looked for amongst her associates and neighbours in Cardiff and investigations soon led to the discovery of a centre of infection in Nos. 15 and 16, Patrick Street, Docks. In these houses an examination of the inmates revealed the existence of three persons who had recently suffered from small-pox in a comparatively slight form and who had received no medical attendance. From this centre and from the case in North Church Street, the infection spread to various parts of the town. The outbreak finally dying out in June. All the cases, with the exception of those which were not discovered until after recovery, were removed to the Cardiff Small-Pox Hospital and a very large number of persons who had been in contact with those infected were vaccinated or re-vaccinated.

The following Table gives the monthly record of cases of Small-pox and Deaths during 1916.

TABLE XVII.

Months.	No. of Cases	Sex		Deaths	
		M.	F.	M.	F.
February	21	6	15	...	1
March	7	3	4	...	...
April	9	5	4	...	...
May	12	6	6	1	...
June	2	2	...	1	...
Total	51	22	29	2	1

The following Table relates to the conditions of vaccination amongst 253 persons who were found to have been in immediate contact with infected persons.

TABLE XVIII.

Small-Pox—Cardiff. 1916. Immediate Contacts, 288.
253 Vaccinated in Infancy, 35 Primary Vaccinated after Contact.

Primary Vaccination after Contact.		Re-vaccinated after Contact.		Vaccinated in Infancy but refused Re-vaccination.		Children under 8 years of age vaccinated in infancy not re-vaccinated
	10 became infected		6 became infected	42 over 8 yrs. of age.	8 became infected	13
35	25 not infected	198	192 not infected		34 not infected	

SCARLET FEVER.—Six deaths were registered from scarlet fever during the year 1916, being equal to an annual death-rate of 0·03 per 1,000 persons living, as compared with 0·05 the rate in 1915, and with 0·06, the average rate in the ten years 1906–1915.

The mortality from scarlet fever throughout the country was as follows during the year 1916 :—

England and Wales	0·04
96 Great Towns	0·04
148 Smaller Towns	0·04
Cardiff	0·03

The number of cases of scarlet fever notified during the year amounted to 478, as compared with 751, the number notified in the previous year. The sickness-rate, or rate of notified cases per 1,000 of the population, amounted to 2·58.

The number of cases of scarlet fever notified during each quarter of the year in the three registration sub-districts were as follows :—

Registration Sub-Districts.	First Quarter.	Second Quarter.	Third Quarter.	Fourth Quarter.	Totals.
East Cardiff	41	24	22	15	102
Central ,, ...	90	39	38	12	179
West ,, ...	45	67	47	38	197

The age periods of persons notified to be suffering from scarlet fever and the percentage proportion of deaths to cases notified in each age period were as follows :—

Ages.	No. of Cases Notified.	Deaths.	Mortality per cent.
0– 1 year	2	1	50·0
1– 5 years	138	4	2·9
5–15 ,, ...	286	1	0·3
15–25 ,, ...	33	—	—
25–65 ,, ...	19	—	—

The following table shows the number of cases of scarlet fever notified in each year since 1891, and shows also the attack-rate, the death-rate, the proportion of deaths to cases notified, &c. :—

TABLE XIX.—SCARLET FEVER.

Year.	Population.	No. of Cases Notified.	Attack rate per 1,000.	No. of Deaths.	Death rate per 1,000.	Percentage Removed to Hospital.	Mortality per cent. of Cases Notified.
1891 ...	130,283	685	5·2	35	0·27	—	5·0
1892 ...	132,895	1,851	13·1	87	0·65	13	4·7
1893 ...	136,168	816	6·0	39	0·28	22	4·7
1894 ...	139,519	577	4·1	8	0·05	31	1·3
1895 ...	142,958	484	3·3	8	0·05	43	1·6
1896 ...	146,479	874	5·9	28	0·19	48	3·2
1897 ...	150,087	758	5·0	17	0·11	50	2·2
1898 ...	153,783	332	2·1	8	0·05	56	2·4
1899 ...	157,414	184	1·1	3	0·01	66	1·6
1900 ...	161,452	383	2·3	11	0·06	65	2·8
1901 ...	164,759	1,362	8·2	29	0·17	47	2·1
1902 ...	166,473	1,433	8·6	36	0·21	48	2·7
1903 ...	168,206	963	5·7	32	0·19	63	3·7
1904 ...	169,957	658	3·8	25	0·14	72	3·3
1905 ...	171,726	362	2·1	4	0·02	75	1·1
1906 ...	173,512	776	4·4	3	0·01	74	0·4
1907 ...	175,318	950	5·4	21	0·11	72	2·2
1908 ...	177,143	475	2·6	10	0·05	78	2·1
1909 ...	178,987	616	3·4	7	0·03	79	1·1
1910 ...	180,849	887	4·8	19	0·10	78	2·1
1911 ...	182,729	753	4·1	16	0·08	77	2·1
1912 ...	184,633	472	2·5	8	0·04	81	1·6
1913 ...	186,554	902	4·8	17	0·09	78	1·8
1914 ...	188,495	1,086	5·7	19	0·10	72	1·7
1915 ...	188,495	751	3·9	11	0·05	78	1·4
1916 ...	*184,900	478	2·5	6	0·03	78	1·2

* Civil population.

The proportion of deaths to cases notified was 1·2 per cent. It will be seen on reference to the tables, that the chief incidence of the disease fell upon children at school ages. Of the six deaths, five, or 83 per cent., occurred amongst children under 5 years of age; of the 478 cases of scarlet fever notified, 376, or 78 per cent., were removed to the Cardiff Isolation Hospital. The relation of the infection to school attendance is referred to in the Annual Report to the Education Authority. There was no indication of milk infection during the year, although careful inquiry was made into the source of milk supply in each case.

DIPHTHERIA AND MEMBRANOUS CROUP.—Thirty-four deaths were registered from these diseases during the year, corresponding to an annual death-rate of 0·18 per 1,000 persons living, as compared with 0·23, the rate in 1915, and with 0·15, the rate in the ten years 1906–1915.

The mortality from diphtheria throughout the country was as follows during the year 1916 :

	Death-rate per 1,000.
England and Wales	0·14
96 Great Towns	0·15
148 Smaller Towns	0·15
CARDIFF	0·18

The number of cases of diphtheria and membranous croup notified during the year amounted to 384, as compared with 469 in 1915. The fatality, or proportion of deaths to cases notified, was 8·8 per cent. Of the cases notified, 287, or 75·0 per cent., were removed to the Cardiff Isolation Hospital.

Number and distribution of cases of diphtheria notified during each quarter of the year 1916 :—

Registration Sub-Districts.	First Quarter.	Second Quarter.	Third Quarter.	Fourth Quarter.	Totals.
East Cardiff	22	32	31	52	137
Central ,, ...	31	33	25	37	126
West ,, ...	33	34	28	26	121

The number of notifications and the rate of fatality at various age periods during 1916, are shewn below :—

Ages.	Cases Notified.	Deaths.	Mortality per cent. of cases notified.
0– 1 year	5	2	40·0
1– 5 years	92	14	15·2
5–15 ,, ...	224	18	8·0
15–25 ,, ...	42	—	—
25 years and upwards	21	—	—

The following table shows the number of cases of diphtheria and membranous croup notified, the attack or sickness-rate, the death-rate, the proportion of deaths to cases notified, &c., in each year since 1891 :—

TABLE XX.

DIPHTHERIA AND MEMBRANOUS CROUP.

Year.	Population.	No. of Cases Notified.	Attack rate per 1,000.	No. of Deaths.	Death rate per 1,000.	Percentage Removed to Hospital.	Mortality per cent. of Cases Notified.
1891	130,283	70	0·5	16	0·12	—	22·8
1892	132,895	164	1·2	36	0·27	—	21·9
1893	136,168	479	3·5	93	0·68	—	19·4
1894	139,519	343	2·4	59	0·42	—	17·2
1895	142,958	248	1·7	46	0·32	3	18·5
1896	146,479	306	2·0	55	0·37	3	17·9
1897	150,087	516	3·4	90	0·59	15	17·4
1898	153,783	960	6·2	129	0·83	21	13·4
1899	157,414	640	4·0	61	0·38	46	9·5
1900	161,452	714	4·4	81	0·50	53	11·3
1901	164,759	734	4·4	78	0·47	47	10·6
1902	166,473	701	4·2	88	0·52	46	12·5
1903	168,206	438	2·5	36	0·21	51	8·2
1904	169,957	406	2·3	31	0·18	47	7·6
1905	171,726	327	1·9	23	0·13	56	7·0
1906	173,512	333	1·9	13	0·07	56	3·9
1907	175,318	304	1·7	23	0·13	59	7·6
1908	177,143	291	1·6	22	0·12	62	7·5
1909	178,987	283	1·5	14	0·07	62	4·9
1910	180,849	363	2·0	24	0·13	68	6·6
1911	182,729	491	2·6	37	0·20	67	7·5
1912	184,633	536	2·9	31	0·17	76	5·7
1913	186,554	558	3·0	41	0·22	67	7·3
1914	188,495	620	3·2	42	0·22	63	6·7
1915	188,495	469	2·4	45	0·23	72	9·5
1916	184,900	384	2·0	34	0·18	75	8·8

During the year swabs were sent to the Cardiff and County Public Health Laboratory from the throats of 207 cases suspected to be diphtheria, the bacteriological examination giving positive results in 65 cases, and negative results in 142.

ENTERIC FEVER.—The number of deaths registered from enteric fever during the year amounted to 5, being equivalent to an annual death rate of 0·02 per 1,000 persons living, as compared with 0·01 in the year 1915, and with 0·04 the average death-rate in the ten years 1906–1915.

The mortality from this disease in the year 1916 throughout the country was as follows :—

	Death-rate per 1,000.
England and Wales	0·03
96 Great Towns	0·03
148 Smaller Towns	0·03
CARDIFF	0·02

The number of cases of enteric fever notified during 1916 was 26 ; of these 16, or 61·5 per cent., were removed to the Cardiff Isolation Hospital.

The number of cases of enteric fever notified, the attack-rate, the death-rate, the proportion of deaths to cases notified, &c., since the year 1891, are shown in the following table :—

TABLE XXI.

ENTERIC FEVER.

Year.	Population.	No. of Cases Notified.	Attack rate per 1,000.	No. of Deaths.	Death rate per 1,000.	Percentage removed to Hospital.	Mortality per cent. of cases notified.
1891 ...	130,283	130	0·9	26	0·19	—	20·0
1892 ...	132,895	118	0·8	24	0·18	3	20·3
1893 ...	136,168	103	0·7	18	0·13	12	17·4
1894 ...	139,519	62	0·4	7	0·05	1	11·2
1895 ...	142,958	79	0·5	14	0·09	13	17·7
1896 ...	146,479	74	0·5	13	0·08	28	17·0
1897 ...	150,087	117	0·7	20	0·13	34	17·0
1898 ...	153,783	80	0·5	17	0·11	23	21·2
1899 ...	157,414	94	0·5	19	0·12	52	20·2
1900 ...	161,452	95	0·5	25	0·15	47	26·3
1901 ...	164,759	73	0·4	11	0·06	57	15·0
1902 ...	166,473	69	0·4	9	0·05	68	13·0
1903 ...	168,206	100	0·5	14	0·08	76	14·0
1904 ...	169,957	40	0·2	9	0·05	57	22·5
1905 ...	171,726	39	0·2	8	0·04	58	20·5
1906 ...	173,512	77	0·4	13	0·07	69	16·9
1907 ...	175,318	62	0·3	13	0·07	56	21·0
1908 ...	177,143	55	0.3	7	0·03	76	12·7
1909 ...	178,987	46	0·2	7	0·03	78	15·2
1910 ...	180,849	36	0·1	7	0·03	66	19·4
1911 ...	182,729	44	0·2	7	0·03	70	15·9
1912 ...	184,633	56	0·3	15	0·08	78	26·8
1913 ...	186,554	27	0·1	6	0·03	66	22·2
1914 ...	188,495	29	0·1	12	0·06	72	41·3
1915 ...	188,495	20	0·1	2	0·01	70	10·0
1916 ...	184,900	26	0·1	5	0·02	61	19·2

The following table shows the death-rates per 1,000 from enteric fever in periods since the year 1875 in Cardiff :—

1875-80	1881-90	1891-1900	1901-1910	1911	1912	1913	1914	1915	1916
0·37	0·33	0·14	0·05	0·03	0·08	0·03	0·06	0·01	0·02

The age periods of the persons notified to be suffering from enteric fever during the year, and the percentage mortality are given in the following table :—

TABLE XXII.

Ages	Cases Notified		Deaths		Mortality per cent. of cases notified (both sexes)
	Male	Female	Male	Female	
Years.					
1— 5	...	...	...	...	...
5—15	2	1	...	1	33·3
15—25	2	11	...	...	...
25—45	5	4	2	2	44·4
45—65	1	...	...	...	...
Totals ...	10	16	2	3	19·2

It will be seen that the attack or sickness-rate per 1,000 of the population was comparatively low.

The rate in Cardiff compares favourably with that in 1912, which amounted to 0·31, being in that year raised above the average in consequence of an outbreak of enteric fever in an institution in the City.

TUBERCULOSIS. — The deaths from all forms of tuberculosis during the year 1916 amounted to 346, including 255 from pulmonary tuberculosis or phthisis. The mortality from phthisis was equal to an annual death-rate of 1·37 per 1,000, as compared with 1·26, the average rate in the ten years 1906–1915.

The mortality from phthisis and other forms of tuberculosis in Cardiff since the year 1880 is shown in the following table :—

TABLE XXIII.

Year.	Deaths from Phthisis.	Deaths from Other Forms of Tuberculosis.	Death-rate per 1,000 (Phthisis).	Year.	Deaths from Phthisis.	Deaths from Other Forms of Tuberculosis.	Death-rate per 1,000 (Phthisis).
1880 ...	177 ...	89 ...	3·21	1898 ...	203 ...	117 ...	1·32
1881 ...	176 ...	77 ...	2·96	1899 ...	208 ...	119 ...	1·32
1882 ...	187 ...	68 ...	2·86	1900 ...	212 ...	110 ...	1·25
1883 ...	186 ...	58 ...	2·67	1901 ...	179 ...	122 ...	1·05
1884 ...	223 ...	55 ...	2·97	1902 ...	224 ...	98 ...	1·34
1885 ...	241 ...	107 ...	3·58	1903 ...	217 ...	93 ...	1·28
1886 ...	214 ...	67 ...	2·78	1904 ...	246 ...	98 ...	1·44
1887 ...	210 ...	75 ...	2·72	1905 ...	235 ...	103 ...	1·36
1888 ...	211 ...	93 ...	2·80	1906 ...	229 ...	95 ...	1·31
1889 ...	224 ...	108 ...	2·79	1907 ...	220 ...	91 ...	1·25
1890 ...	231 ...	142 ...	3·18	1908 ...	218 ...	94 ...	1·22
1891 ...	239 ...	124 ...	2·78	1909 ...	234 ...	74 ...	1·30
1892 ...	242 ...	127 ...	1·82	1910 ...	216 ...	88 ...	1·19
1·93 ...	230 ...	151 ...	1·68	1911 ...	235 ...	81 ...	1·28
1894 ...	227 ...	134 ...	1·62	1912 ...	244 ...	64 ...	1·32
1895 ...	242 ...	127 ...	1·67	1913 ...	233 ...	69 ...	1·24
1896 ...	203 ...	114 ...	1·38	1914 ...	230 ...	63 ...	1·22
1897 ...	206 ...	131 ...	1·99	1915 ...	252 ...	96 ...	1·33
				1916 ...	255 ...	91 ...	1·37

TABLE XXIV.

Death-rates from Phthisis per 1,000 persons living in the several Municipal Wards :—

	1905	1906	1907	1908	1909	1910	1911	1912	1913	1914	1915	1916
CARDIFF ...	1·36	1·31	1·25	1·22	1·30	1·19	1·28	1·32	1·24	1·22	1·33	1·37
Roath Ward	1·12	0·74	0·72	0·71	0·96	1·18	1·11	0·83	0·80	0·49	0·90	0·72
Park ,,	0·89	0·69	0·79	0·82	0·95	0·92	1·24	0·99	0·57	1·03	1·15	1·36
Splott ,,	0·96	1·12	0·59	0·81	0·69	0·76	1·19	1·09	0·86	1·11	1·07	1·10
Central ,,	1·43	1·23	0·62	1·22	0·81	1·77	3·44	2·64	3·04	2·35	2·89	3·75
South ,,	1·30	1·15	1·54	1·53	1·40	2·50	2·86	2·57	2·93	3·44	1·47	2·85
Cathays ,,	0·88	0·67	0·75	1·04	0·72	1·02	0·86	1·22	1·28	0·87	0·96	1·24
Adamsdown ,,	0·95	1·96	1·59	1·09	1·42	1·24	1·21	1·50	1·10	1·04	1·56	1·40
Riverside ,,	1·00	0·94	1·00	1·48	0·60	1·27	0·80	1·35	1·26	1·03	1·03	0·81
Canton ,,	1·17	0·78	1·02	0·76	0·98	1·05	1·04	1·17	1·29	1·35	1·14	0·69
Grangetown ,,	1·21	1·34	1·10	0·90	1·09	1·08	0·90	1·25	1·01	1·07	1·77	1·36

The Public Health (Tuberculosis) Regulations, 1912, became operative on the 1st February, 1913. These Regulations repeal the three series of Regulations previously in force, they simplify the system of notification and extend its operation to all forms of Tuberculosis.

The Notifications under these Regulations comprise primary and supplemental Notifications by medical practitioners. Primary notification of every new case of tuberculosis is required to be made to the Medical Officer of Health by every Private Practitioner, District Medical Officer

of a Poor Law Union and Medical Officer of a Tuberculosis Dispensary. Primary notification is also required from Medical Officers of Hospitals, including Lunatic Asylums and Sanatoria other than Sanatoria approved by the Local Government Board under the National Insurance Act. In the case of out-patients the notifications are to be sent to the Medical Officer of Health for the District in which the patient's residence, at the date of this notification, is situated, and in the case of in-patients to the Medical Officer of Health for the District within which the place of residence of the person was situated before his admission to the Hospital. School Medical Inspectors are required to notify at the end of each week all cases of Tuberculosis coming to their notice in the course of inspections at schools, whether a case has been previously notified by some other medical practitioner or not. In addition to the primary notifications required of Medical Officers of Poor Law Institutions and Sanatoria, supplemental notification is to be made weekly of all cases admitted during the week and believed by the Medical Officer of the Institution to have been previously notified. Supplemental notification is also required to be made after the end of each week of all cases discharged from the Institution during the week.

Under the provisions of the National Insurance Act, 1911, the treatment of Tuberculosis is available for the whole community, both insured and uninsured, and arrangements are made by the Sanitary Authority and the Cardiff Insurance Committee with the Welsh Memorial Association for this treatment. Contributions are made jointly to this Association by the Sanitary Authority and Insurance Committee in consideration of which the Association undertakes the treatment of cases of Tuberculosis in their Institutions. A hospital situated at Glan-Ely, about three miles from Cardiff, is equipped with the most moden appliances and contains 70 beds for medical, and 110 beds for surgical cases, and in which there is a Resident Medical Officer, Dr. A. Brownlee and an efficient staff of Nurses. The Association has also large Sanatoria in various parts of Wales.

The Hospital and the Sanatoria are intended for the accommodation of patients from all parts of the community, regard being paid as far as possible to the place of residence of the patients. A Dispensary or Institute has also been established by the Association in Cardiff under the superintendence of Dr. J. Gilchrist, the Tuberculosis physician for this District, who is an officer of the Association. From this Institute suitable cases are transferred to Hospital and Sanatoria as vacancies occur.

Dr. Gilchrist also exercises the necessary supervision over the domiciliary treatment of tuberculosis. The procedure at the Institute involves the joint action of the Staff of the Medical Officer of Health and the Tuberculosis Physician.

Upon receipt of a notification of a case of tuberculosis the Medical Officer of Health instructs the Health Visitors engaged in this work to visit the house and to assist those responsible in taking the necessary steps for preventing the spread of infection and for obtaining the requisite and continuous treatment. If it is a case which should be dealt with under the "Sanatorium Benefit" Clauses of the Insurance Act, it is referred to Dr. Gilchrist, who arranges for a consultation with the Medical practitioner in attendance and the subsequent treatment is decided upon.

From the returns from the Welsh National Memorial Association the fatal cases of tuberculosis under their care were distributed as follows :—

	Pulmonary.	Non-Pulmonary.
Domiciliary Cases	65 ...	3
Institute (Dispensary)	1 ...	1
Hospital (Glan Ely)	23 ...	1
Sanatorium	1 ...	0
	—	—
Total ...	90 ...	5
	—	—

The 346 deaths from tuberculosis during the year 1916 includes therefore 24 in Glan Ely Hospital, 1 in a Sanatorium, 55 in the Cardiff Union Infirmary, and also 29 deaths of persons belonging to Cardiff who died elsewhere. The remaining 237 dying in their own homes in Cardiff.

It is clear therefore that the present arrangements cannot be regarded as an efficient organisation for preventing the spread of infection from the advanced cases of phthisis terminating

fatally, cases which should if possible be strictly isolated. Home isolation however carefully supervised, in theory, is seldom efficiently carried out in practice. It would appear that further hospital accommodation with powers of detention are necessary to complete the preventive measures now in operation. In all probability the Health Committee will as soon as possible take the necessary steps in this direction, which will probably involve an alteration in the agreement with the Memorial Association on the lines of the recommendations contained in my Report for the year 1912.

Of the 513 cases of tuberculosis notified (Primary notifications) during the year, 308 appear, by the Memorial Association returns, to have been referred to, and dealt with by, the Tuberculosis Officer, Dr. Gilchrist ; 283 supplemental notifications on Form C. of cases previously notified on Form A., were received, 32 from the Union Infirmary, Cardiff, and 251 from Glan Ely Hospital and Sanatoria.

The following tables give an analysis of the cases of tuberculosis which have been notified to the Medical Officer of Health in the City of Cardiff during the year 1916.

TABLE XXV.

Deaths from Pulmonary Tuberculosis and Other Forms of Tuberculosis—age periods and sex :—

Age Periods.	Deaths from Tuberculosis.					
	Pulmonary.			Non-Pulmonary.		
	Males	Females	Totals	Males	Females	Totals
Under 1 year	1	1	2	7	11	18
1 and under 5	3	2	5	13	9	22
5 ,, ,, 10	2	3	5	7	5	12
10 ,, ,, 15	1	5	6	4	5	9
15 ,, ,, 20	9	21	30	3	6	9
20 ,, ,, 25	15	24	39	4	2	6
25 ,, ,, 35	21	26	47	2	1	3
35 ,, ,, 45	31	27	58	4	4	8
45 ,, ,, 55	23	13	36	3	...	3
55 ,, ,, 65	14	6	20	...	1	1
65 and upwards	5	2	7	...	...	...
Totals	125	130	255	47	44	91

TABLE XXVI.

Deaths from Pulmonary Tuberculosis and other Forms of Tuberculosis in Municipal Wards :—

	Deaths from Tuberculosis.					
	Pulmonary.			Non-Pulmonary.		
	Males	Females	Totals	Males	Females	Totals
Central	25	16	41	4	2	6
South	20	9	29	6	2	8
Cathays	10	20	30	5	6	11
Adamsdown	9	10	19	3	6	9
Riverside	9	6	15	1	2	3
Canton	11	7	18	6	4	10
Grangetown	16	17	33	8	8	16
Roath	9	7	16	2	5	7
Park	9	24	33	6	3	9
Splott	7	14	21	6	6	12
Totals	125	130	255	47	44	91

TABLE XXVII.

Notifications of cases of Pulmonary Tuberculosis and Other Forms of Tuberculosis—age periods and sex :—

Age Periods.	Notifications of Tuberculosis.					
	Pulmonary.			Non-Pulmonary.		
	Males	Females	Totals	Males	Females	Totals
Under 1 year	1	1	2	4	7	11
1 and under 5	3	1	4	11	9	20
5 ,, ,, 10	5	4	9	17	18	35
10 ,, ,, 15	2	7	9	10	17	27
15 ,, ,, 20	15	26	41	5	5	10
20 ,, ,, 25	26	37	63	3	9	12
25 ,, ,, 35	52	37	89	7	6	13
35 ,, ,, 45	40	28	68	6	4	10
45 ,, ,, 55	36	15	51	...	1	1
55 ,, ,, 65	23	7	30	1	...	1
65 and upwards	4	2	6	...	1	1
Totals	207	165	372	64	77	141

TABLE XXVIII.

PUBLIC HEALTH (TUBERCULOSIS) REGULATIONS, 1912.

Summary of Notifications during the year 1916.

	Notifications on Form A.													Notifications on Form B.					Notifications on Form C.	
	Primary Notifications.												Total Notifications (i.e., including cases previously notified by other doctors).	Primary Notifications.				Total Notifications (i.e., including cases previously notified by other doctors).	Poor Law Institutions.	Sanatoria.
	0 to 1	1 to 5	5 to 10	10 to 15	15 to 20	20 to 25	25 to 35	35 to 45	45 to 55	55 to 65	65 & upwards.	Total		Under 5	5 to 10	10 to 15	Total.			
Pulmonary :—																				
Males	1	3	5	2	15	26	51	40	37	23	4	207	330	...	...	...	...	...	29	137
Females	1	1	3	7	26	37	38	28	14	7	2	164	242	...	1	...	1	1	1	79
Non-Pulmonary :—																				
Males	4	11	17	10	5	3	7	6	...	1	...	64	83	...	...	...	...	2	1	22
Females	7	9	17	14	5	9	6	4	1	...	1	73	92	...	1	3	4	12	1	13
Totals	13	24	42	33	51	75	102	78	52	31	7	508	747	...	2	3	5	15	32	251

TABLE XXIX.

Notifications of cases of Pulmonary Tuberculosis and Other Forms of Tuberculosis in Municipal Wards :—

Municipal Wards.	Notifications of Tuberculosis.					
	Pulmonary.			Non-Pulmonary.		
	Males	Females	Totals	Males	Females	Totals
Central	29	19	48	4	8	12
South	26	5	31	5	1	6
Cathays	16	26	42	8	10	18
Adamsdown	19	13	32	6	7	13
Riverside	21	14	35	6	9	15
Canton	28	11	39	10	14	24
Grangetown	25	21	46	7	7	14
Roath	11	14	25	5	...	5
Park	15	28	43	10	9	19
Splott	17	14	31	3	12	15
Totals	207	165	372	64	77	141

TABLE XXX.

Cases of Tuberculosis visited by the Health Visitors—in Municipal Wards, and whether "insured" or "uninsured" persons, or "dependants."

Municipal Wards.	Insured.		Dependants.		Uninsured.		Totals
	Males	Females	Males	Females	Males	Females	
Central	11	4	...	5	4	10	34
South	10	1	5	3	8	5	32
Cathays	15	7	3	10	3	12	50
Adamsdown ...	11	3	1	12	6	3	36
Riverside	7	4	3	5	2	9	30
Canton	24	11	4	8	9	6	62
Grangetown ...	15	3	5	10	5	6	44
Roath	4	3	3	3	2	3	18
Park	15	8	5	8	6	12	54
Splott	15	8	1	9	2	3	38
Totals ...	127	52	30	73	47	69	398

The foregoing Table relates to cases visited only. The difference between the number of cases visited and the number notified is due to some of the notified cases being in sanatoria, hospitals, etc., and consequently unvisitable, and to others not being traced by the Health Visitors, *e.g.*, casual lodgers in lodging houses, etc.

Occupations of the 398 patients visited :—

Apprentice Engineer ...	1	Donkeymen	2	No occupation	27
Accountant	1	Errand Boys	2	Not stated	12
At home	14	Engineer	1	Nursemaid	1
Bricklayer	1	Engine Driver	1	Packer	1
Biscuit Packer	1	Electricians	2	Postman	1
Board of Trade Employé	1	Engine Cleaner	1	Painters	2
Builders' Assistants ...	2	Farm Labourer	1	Platers' Helper	1
Boilermakers	3	Factory Hands	3	Platelayer	1
Blacksmith's Striker ...	1	Flag Maker	1	Post Office Employees ...	3
Brewery Bottler	1	Flour Bag Cleaner ...	1	Porters	2
Bakers	2	Flour Carrier	1	Potato Sorter	1
Bookbinder	1	French Polisher	1	Rivet Warmer	1
Butcher	1	Film Repairer	1	Soldier	1
Bottlewasher	1	Fireman	1	Scholars	52
Chambermaid	1	Gold Digger	1	Stoker	1
Collier	1	Gardener	1	Shunter	1
Collier's Boy	1	Gasfitter	1	Shop Assistants	8
Commercial Travellers ...	4	Gasworks Labourers ...	2	Seamen	6
Carpenters	3	Housewives	76	Shopkeeper	1
Charwomen	3	Hawker	1	Surveyor	1
Cinema Attendants ...	2	Hotel Keeper	1	Ship's Rivetter	1
Carman (Railway) ...	1	Hairdresser	1	Stone Mason	1
Chauffers	3	Insurance Agents ...	3	Store Keeper	1
Compositor	1	Labourers...	14	Ship's Fireman	1
Credit Draper	1	Laboratory Attendant ...	1	Tailoresses	5
Club Porter	1	Laundry Hands	6	Tailors	4
Clerks	15	Messroom Steward ...	1	Teacher	1
Coaltrimmer	1	Motor Mechanics ...	2	Typists	3
Discharged Soldiers ...	18	Miner	1	Tube Blower	1
Dressmakers	3	Mate (Merchant Service)	1	Waiter	1
Domestic Servants ...	12	Musicians	2	Window Cleaner ...	1
Dairyman...	1	Moulding Finisher ...	1	Warehousemen	3
Delivering Milk	1	Machinists	2	Waitress	1
Drayman	1	Milliner	1		
Dock Waterman ...	1	Newspaper Organizer ...	1	Total	... 398
Drivers	4	Newspaper Deliverer ...	1		

In my annual report for 1913, a somewhat detailed account was given of the methods adopted in this district with a view of preventing the spread of tuberculosis, the relation of the Sanitary Authority to the work under the Insurance Act, and to the co-operation with the Welsh National Memorial Association, so that it is unnecessary to enter upon these matters on this occasion. I am indebted to Dr. Gilchrist, the Tuberculosis Physician for the Cardiff area, for much of the information contained in the several tables relating to the treatment of this disease, and I may mention that this town and neighbourhood are also much indebted to him for the excellent work which he has accomplished at the " Institute " or Tuberculosis Dispensary.

It is obvious that a complete and efficient scheme for dealing with Tuberculosis involves an intimate official association between the Medical Officer of Health and the Tuberculosis Officer, even when the latter is not, as in other parts of the United Kingdom, on the Staff of the Medical Officer of Health. During the year under consideration this co-operation has continued uninterruptedly and with much advantage to the Health Department of this City, and to the Insurance Committee which administers the funds available for Sanatorium Benefit under the provisions of the National Insurance Act.

It is unnecessary to remind the Sanitary Authority again that however influential and important may be the work of a well organised body such as the Welsh National Memorial Association, their own responsibilities as the guardian of the public health are in no way diminished, as they alone possess the statutory powers for carrying out the preventive measures upon which the decline in the incidence of tuberculosis upon the community must ultimately depend.

Sleeping accommodation of 398 patients, as found by the Health Visitors at the time of the first visits :—

Patients with Separate Beds and Separate Rooms	132
Patients with Separate Beds but not Separate Rooms ...	47
Patients with neither Separate Beds nor Separate Rooms ...	165
Patients sleeping in Living Rooms	11
Not stated	43
Total	398

In 267 instances of the 398 cases visited, there was a definite history of relatives having been previously affected with the disease, as follows :—

Father	19
Mother	24
Brother	52
Sister	45
Husband	5
Wife	5
Son	11
Daughter	11
Paternal Relatives	22
Maternal Relatives	44
Other Relatives	29
Total	267

RE-VISITS.

Re-visits paid to cases notified prior to 1st January, 1916 ...	163
Re-visits paid to cases notified during the year 1916	449
Total	612

TABLE XXXI.

Cases admitted to and discharged from Sanatoria and Hospitals according to notifications (Forms C. and D.) received under the Tuberculosis Regulations, 1912 :—

Age Periods.	Admitted.			Discharged.		
	Males	Females	Totals	Males	Females	Totals
Under 1 year	...	1	1	...	...	...
1 and under 5	5	...	5	2	...	2
5 ,, ,, 10	12	7	19	4	1	5
10 ,, ,, 15	8	10	18	5	5	10
15 ,, ,, 20	14	21	35	10	11	21
20 ,, ,, 25	32	22	54	24	21	45
25 ,, ,, 35	32	17	49	21	9	30
35 ,, ,, 45	36	11	47	28	8	36
45 ,, ,, 55	18	2	20	9	2	11
55 ,, ,, 65	9	...	9	4	...	4
65 and upwards	1	...	1	...	...	...
Totals	167	91	258	107	57	164

Applications to the Cardiff Insurance Committee for Sanatorium Benefit and form of treatment recommended by the Committee :—

Applications	404
Form of treatment :—	
Residential	132
Domiciliary	131
Institute (Dispensary)	85
No treatment	181

Many of the cases received more than one form of treatment ; the figures given above relate to the treatment recommended in all instances.

TABLE XXXII.

New cases of Tuberculosis (residents of Cardiff) examined at the Tuberculosis Institute (Welsh National Memorial Association) :—

Age Periods.	Males	Females	Totals
Under 1 year	...	...	...
1 and under 5	6	3	9
5 ,, ,, 10	14	12	26
10 ,, ,, 15	8	16	24
15 ,, ,, 20	19	29	48
20 ,, ,, 25	23	26	49
25 ,, ,, 35	34	27	61
35 ,, ,, 45	32	15	47
45 ,, ,, 55	14	4	18
55 ,, ,, 65	5	...	5
65 and upwards	...	...	...
Totals	155	132	287

TABLE XXXIII.

Distribution of Tuberculosis Institute cases in Municipal Wards and whether insured or uninsured persons :—

Municipal Wards.	Insured	Uninsured	Totals
Central	7	9	16
South	10	11	21
Cathays	18	16	34
Adamsdown	8	11	19
Riverside	14	13	27
Canton	28	22	50
Grangetown	21	18	39
Roath	8	8	16
Park	17	18	35
Splott	14	16	30
Totals	145	142	287

CEREBRO SPINAL MENINGITIS.—The number of cases notified during the year was five. Several cases were notified after the death of the patient. Lumbar punctures were made whenever possible, and in no case were meningo-cocci found in the cerebro spinal fluid of these patients. The contacts were examined and when necessary naso-pharyngeal swabs were taken for bacteriological examination.

INFANT MORTALITY.—The rate of infant mortality in Cardiff in the year 1916, calculated in the proportion of deaths under one year of age to 1,000 births registered, was at the rate of 89, compared with 106 in the year 1915, and with 117, the average rate for the ten years 1906–1915.

Rates of infant mortality throughout the country, as compared with that of Cardiff during 1916 :—

	Deaths under 1 year per 1,000 births.
Engiand and Wales	91
96 Great Towns	99
148 Smaller Towns	90
CARDIFF	89

TABLE XXXIV.

Rates of infant mortality in Cardiff compared with the rates in the large towns and in England and Wales during past years :—

Period	Deaths under One Year per 1,000 Births		
	Cardiff	Great Towns	England and Wales
1881—1890	165	162	141
1891—1900	161	172	153
1901	148	168	151
1902	145	145	133
1903	122	144	132
1904	144	160	146
1905	118	160	146
1906	134	145	133
1907	131	127	118
1908	124	128	121
1909	103	118	109
1910	111	115	106
1911	135	140	130
1912	110	101	95
1913	115	117	109
1914	109	114	105
1915	106	128	114
1916	89	99	91

From the foregoing table it will be seen that, comparing the rates of infant mortality in the two periods 1881–90 and 1891 -1900, an actual increase is shown in the latter decennium, both in England and Wales as a whole and in the large towns. In Cardiff a slight decrease in the mortality is shewn in the later period. Since the year 1900 there has generally been a steady, but not a very considerable, decline in this mortality throughout the country. With two exceptions, the rate of infant mortality in Cardiff was below the average in the large towns. In the year 1907, the rate was 131, as compared with 127 in the large towns, and in 1912 it was 110, as compared with 101.

TABLE XXXV.

The following table shows the rates of infant mortality in the several municipal wards, the highest rate in each year being underlined :—

	Deaths under one year per 1,000 births.									
	1907	1908	1909	1910	1911	1912	1913	1914	1915	1916
Cardiff (Whole District) ...	131	124	103	111	135	110	115	109	106	89
Roath Ward	121	115	105	127	135	88	93	79	89	102
Park ,, ...	95	97	77	72	117	60	100	99	83	69
Splott ,, ...	135	130	84	109	152	93	111	160	73	80
Central ,, ...	180	135	96	179	160	199	136	113	155	212
South ,, ...	176	140	154	148	213	129	121	119	116	94
Cathays ,, ...	107	99	78	105	120	107	125	90	124	83
Adamsdown Ward ...	134	114	160	125	117	126	129	140	132	122
Riverside ,, ...	109	128	89	112	132	80	77	77	75	74
Canton ,, ...	102	127	101	94	120	115	107	100	95	51
Grangetown ,, ...	159	133	110	114	132	142	143	117	139	100

TABLE XXXVI.

The chief causes of death amongst infants under one year of age in Cardiff during the years 1907–1916 are shewn in the following table :—

Cause of Death.	Deaths under one year of age.									
	1907	1908	1909	1910	1911	1912	1913	1914	1915	1916
Premature Birth ...	95	113	89	96	97	91	115	99	95	65
Diarrhœa and Enteritis	80	141	77	77	201	44	125	88	88	63
Pneumonia	83	46	42	46	39	59	38	46	43	44
Bronchitis	54	30	33	46	26	53	40	31	33	21
Whooping Cough	30	25	30	11	32	22	9	36	21	15
Tuberculosis (all forms)	22	29	22	24	25	15	20	18	23	18
Atrophy and Debility	86	80	61	63	57	60	73	63	58	51
Convulsions	47	52	55	44	41	31	42	32	26	31
Measles	35	2	7	16	1	42	2	8	10	5
Congenital Defects ...	11	18	26	22	20	15	13	18	15	13

NOTIFICATION OF BIRTHS ACT, 1907.—This Act, which was adopted in 1908, provides for the notification to the Medical Officer of Health of every birth within the City by the father, if residing in the house where the birth takes place, and by any person in attendance upon the mother at the time of, or within six hours after, the birth. The notification must be given to the Medical Officer of Health within thirty-six hours after birth.

The following Table gives the number of births notified under this Act in each quarter of the year 1916, together with the number of still-births notified.

TABLE XXXVII.

1916	Births notified by Midwives	Births notified by Doctors or Parents	Duplicate Notifications received	Actual Number of Births notified	Still-births notified
1st Quarter ...	1,099	34	9	1,074	50
2nd ,, ...	1,200	40	18	1,164	58
3rd ,, ...	1,177	33	42	1,155	13
4th ,, ...	990	30	28	981	11
Totals ...	4,466	137	97	4,374	132

Births notified during the year 1916 4,374
Births registered during the year 1916 4,389

It will be seen that 99.6 per cent. of the births registered were notified.

Since the adoption of the Notification of Births Act, it has been possible to undertake certain administrative work with a view of reducing the rate of infant mortality. A systematic attempt is made to impart instruction to mothers in the care and management of infants. This takes the form of weekly "Infant Consultations" and domiciliary visitations. The general supervision is undertaken by the Medical Officer of Health, and the actual work, which is of a most useful kind was during last year carried out in a most efficient manner under the immediate direction of the Lady Assistant Medical Officer, Dr. Creaser, assisted by Miss W. Jones, Miss B. King, Miss E. Heald, Miss G. Knapp and Miss E. Bishop, the Health Visitors of the Sanitary Authority. No voluntary Association is connected with this work, which is entirely municipal, and forms part of the health administration under the Health Committee of the Corporation.

"Infant Consultations" were established in Cardiff in the year 1906; six centres were formed in several parts of the town. Subsequently, in 1910, it was found more convenient to concentrate the work in one centre, in suitable rooms in the Department of the Medical Officer of Health in the City Hall, and since July in that year these "Consultations" have been held weekly on Tuesdays in these rooms. Since September, 1915, another centre has been established at the Salvation Army Hall in May Street, Cathays, where "Consultations" are held on Thursdays. The mothers receive instruction in the feeding and management of the infants. They are weighed at each visit, the weight being recorded on charts; the mothers can readily observe the progress and development which is noted each week. The "Consultation" therefore serves as a centre of instruction for mothers and for expectant mothers. It is also utilized as a training centre for Health Visitors, School Nurses, and pupil Midwives, and is co-ordinated for this purpose with the theoretical course of instruction given in the classes of lectures and demonstrations in the University College and Technical School. It forms a useful link connecting the machinery of the Notification and Births Act and the Midwives Act, bringing all the workers in these Departments into intimate touch and association.

"Ante-Natal Clinics" have been held the first and third Wednesdays in each month, at the City Hall.

It is capable also of further extensions in the direction of some supervision over the period of child life, which intervenes between infancy and admission to the Infants' Department of the Elementary School. It is found in the examination of school children in these Departments, that many of the ailments or physical defects to which the young children are subject, might have been prevented by earlier attention. This applies, of course, to the poorer classes, who cannot readily obtain skilled advice, and who perhaps are less apt to realise the importance of such assistance than those living under more favourable conditions. The actual medical treatment of sick children is not undertaken at the "Consultations"; when this is found necessary, the mother is referred to her own doctor, or to a hospital or dispensary. The treatment is preventive, the object being to instruct the mothers in the care and management of themselves and their infants, so as to avoid the necessity of actual treatment.

The individual babies under observation at the "Infant Consultation" and the attendances during the year 1916 were as follows:—

	No. of Babies.	No. of Attendances.
1st Quarter	409	... 1,042
2nd ,, ...	424	... 1,044
3rd ,, ...	453	... 1,199
4th ,, ...	441	... 1,039

Altogether, 1,094 babies attended the "Consultations" during the year 1916, of these, 760 were regular attendants, and 334 casual visitors. Ninety-eight "Consultations" were held during the year with a total number of 4,324 attendances. The average attendance at each "Consultation" was 65, City Hall, and 24 at May Street.

The deaths among the infants attending the "Consultation" were as follows:—

1916	Under 12 months.	Over 12 months.	Total.
1st Quarter	9	... 2 ...	11
2nd ,, ...	5	... 5 ...	10
3rd ,, ...	8	... 3 ...	11
4th ,, ...	6	... 11 ...	17
	28	21	49

The following Table gives the number of infants, at ages under one year, who attended the "Consultation" during the year 1916.

Ages.	No. of Infants.
1—2 weeks	8
2—3 ,, ...	24
3—4 ,, ...	29
1—3 months	252
3—6 ,, ...	162
6—9 ,, ...	126
9—12 ,, ...	103
Total under 12 months ...	704

The deaths amongst 704 children under 1 year of age attending the "Consultation" amounted to 28, giving a rate of mortality of 39·7 per 1,000 infants attending under that age. It must be remembered, however, that very few infants are brought to the "Consultations" during the first fortnight of their lives, in which period the mortality is much higher than at later periods

The ages at death and causes of death amongst the 28 children under one year of age were as follows :—

Ages.	Number.	Cause of Death.
Under 1 week ...	0	
1—2 weeks ...	0	
2—3 ,, ...	0	
3—4 ,, ...	0	
4 weeks to 3 months	6 ...	1 bronchitis, 2 gastritis, 3 Marasmus.
3—6 months ...	10 ...	2 broncho-pneumonia, 1 tubercular meningitis, 1 whooping cough, 3 diarrhœa, 1 congenital specific disease, 1 convulsions, 1 hydrocephalus.
6—9 ,, ...	6 ...	2 pneumonia, 2 tubercular meningitis, 1 enteritis, 1 whooping cough.
9–12 ,, ...	6 ...	2 rickets, 3 pneumonia, 1 enteritis.

The Health Visitors Miss Jones, Miss King, Miss Heald, Miss Knapp, and Miss Bishop (Mrs. Huntley being on Military duty), paid a large number of visits to the homes of those mothers who most required and desired instruction from them. Altogether, 11,336 visits were paid, the number of infants visited within two weeks of their birth being 3,746.

Nature of food of 3,746 infants under one year of age visited by the Health Visitors :—

Breast fed	3,479
Breast fed and other food	85
Cows' milk	69
Cows' milk and other food	2
Condensed milk	71
Condensed milk and other food	12
Patent foods	28
Total	3,746

PUBLIC HEALTH (OPHTHALMIA NEONATORUM) REGULATIONS, 1914.

By this Order of the Local Government Board, Ophthalmia Neonatorum became compulsorily notifiable by Medical Practitioners and Certified Midwives on the 1st April, 1914.

During the year 1916, 45 notifications were received. Seven of these were duplicate notifications, making a total of 38 cases notified, as follows :—

Cases notified by Medical Practitioners	13
,, ,, Medical Practitioners and Midwives	7
,, ,, Midwives	18
Total number of Cases	38

A Medical Practitioner was in attendance at the birth in	7 cases
A Certified Midwife was in attendance in	31 ,,
	38

Three Midwives were reprimanded by the Medical Officer of Health, one for failing to obtain medical help, one for delaying to notify, and the third for failing to notify a case.

Results in the 38 cases notified were :—

Complete recovery	30
In Union Hospital	3
In the Infirmary	1
Left the district—improved	1
Opacity in right eye	2
,, ,, left eye	1
Total	38

Three of these infants have since died.

When the notification of a case is received, the infant is visited immediately by a Health Visitor, and if a doctor is not already in attendance she urges the parents to obtain medical advice without delay—the case is then visited from time to time to see that the medical instructions are carried out.

An arrangement has been made with the Queen Victoria Jubilee Nurses' Institute for their nurses to assist in the carrying out of the treatment prescribed by the Medical Practitioners.

NOTIFICATION OF MEASLES AND GERMAN MEASLES.

The following Table shows the number of cases of Measles and German Measles notified during the year :—

TABLE XXXVIII.

	Measles	German Measles	Total
Notified by Medical Practitioners	1,521	98	1,619
Notified by Parents, Guardians, and other persons	180	...	180
Total	1,701	98	1,799

The following visits were made by Miss Knapp, Health Visitor, to the infected homes :—

First visits	1,671
Re-visits	533
	2,204
Cases referred to Queen's' Nurses	285
Visits paid by Queen's Nurses	2,723

MIDWIVES ACT, 1902.—This Act has now been in operation since the 1st April, 1903, and is administered locally by the Health and Port Sanitary Committee, with the Medical Officer of Health as Executive Officer.

The Act provides for the education of midwives, and for the certification and enrolment of women qualified to act in that capacity. No person can now habitually act as a midwife, otherwise than under the direction of a qualified medical practitioner, unless she is certified under this Act. The Certificate of the Central Midwives Board can only be obtained after the training specified in the Rules of the Board, and after passing the Board's Examination. A certain number of midwives were, however, placed on the roll of Midwives and certified in virtue of their having been in practice before the passing of the Act.

The following Tables give information relating to the administration of the Midwives Act during the year 1916.

Number of Midwives on Roll for 1916	111

QUALIFICATIONS OF CERTIFIED MIDWIVES.

Bona fide	49
Certificate of London Obstetrical Society	6
Certificate of Central Midwives Board	56
Total	111

Particulars as to appliances, etc., possessed by Midwives :—

Washable dresses	76
Bags for appliances	76
Appliances—complete	69
Appliances—part	7
Case Books	76
Record Books	73

Records of sending for medical help received from Midwives :—

In the case of the mother	169
In the case of the child	39
Total	208

RECORDS OF SENDING FOR MEDICAL HELP BY MIDWIVES.

In the case of the Mother :—

Abortion	7
Delay in labour	47
Malpresentation	19
Ante-Partum Hæmorrhage	12
Post-Partum Hæmorrhage	1
Retained Placenta	10
Ruptured Perineum	19
Pyrexia	5
Small Pelvis	18
Prolapse of Cord	2
Illness of Mother	9
Premature Rupture of Membranes	4
Rigid Cervix	1
Eclampsia	3
Collapse of Patient	1
Twin Labour	1
Rigid Perineum	1
Placenta Prævia	2
Stillbirths	2
Uterine Inertia	5
Total	169

In case of the Child :—

Feebleness and Illness of Infant	10
Skin Rash	2
Ophthalmia Neonatorum	10
Deformity of Infant	1
Convulsions	6
Death of Infant	2
Premature Infant	6
Spinal Tumour...	1
Cleft Palate	1
	39
Still-births notified by Midwives	132
Still-births attended by Midwives without Medical Practitioner	82
Cases of Puerperal Fever attended by Midwives	9

During the year one certified midwife was reported to the Central Midwives Board, and four midwives were censured by the Medical Officer of Health for failing to comply with the Rules of the Central Midwives Board.

Number of visits to Midwives	175
Number of Midwives visited	96
Number of Midwives inspected	76

MILK SUPPLY.—Closely associated with the question of infant mortality is that of the control of the milk supply to the public. Besides the powers conferred by the Public Health Act, 1875, the Public Health Acts Amendment Act, 1907, and the Infectious Disease (Prevention) Act, 1890, the Cardiff Sanitary Authority possesses special powers under the Cardiff Corporation Act, 1909.

The Milk and Cream Regulations came into operation on the 1st October, 1912, and as regards Article V. (1) on January 1st, 1913. This Article relates to the description by the seller of preserved cream, upon advertisements, price lists, etc., showing that the article sold is cream to which preservatives have been added.

The following tables relate to the proceedings taken under the Regulations :—

TABLE XXXIX.

1. MILK ; and CREAM NOT SOLD AS PRESERVED CREAM.

	Number of samples examined for the presence of a preservative	Number in which a preservative was reported to be present
Milk	584*	1
Cream	50	10

* Samples taken under the Sale of Food and Drugs Acts, and included in Table XL.

TABLE XL.

Nature of preservative in each of the foregoing ten cases, and action taken under the Regulations in regard to same :—

No. of Sample.	Description.	Preservative present.	Action taken.
277	Raw Cream ...	0·28% of boric acid	Informal sample.
509	,, ,, ...	0·26% ,, ,, ...	Ditto
543	,, ,, ...	0·24% ,, ,, ...	Explanation received
544	,, ,, ...	0·44% ,, ,, ...	Ditto
548	,, ,, ...	0·35% ,, ,, ...	Informal sample.
563	,, ,, ...	0·38% ,, ,, ...	Explanation received.
579	,, ,, ...	0·36% ,, ,, ...	Ditto
582	,, ,, ...	0·15% ,, ,, ...	Informal Sample.
645	,, ,, ...	0·99% ,, ,, ...	Explanation received.
825	,, ,, ...	0·32% ,, ,, ...	Informal Sample.

2. Cream Sold as Preserved Cream.

(*a*) Instances in which samples have been submitted for analysis to ascertain if the statements on the label as to preservatives were correct :—

(i)	Correct statements made	40	(Including 39 informal samples.)
(ii)	Statements incorrect ...	10	5
	Total	50	(,, 44 ,, ,,)

(*b*) Determinations made of milk-fat in cream sold as preserved cream :—

(i)	Above 35 per cent.	50
(ii)	Below 35 per cent.	...
	Total ...	50

(*c*) Instance where (apart from analysis) the requirements as to labelling or declaration of preserved cream in Article V. (1) and the proviso in Article V. (2) of the Regulations have not been observed :—

No. of Sample.	Infringement.	Action taken.
579	Cream deposited for sale in a vessel that was not labelled	Cautioned by Local Authority

Forty-four samples of mixed milk were taken in Cardiff, including the milk from 1,379 cows supplying milk to the City. Evidence of the presence of tubercle bacilli was found in one sample. Of these samples, five came from cowsheds in Cardiff, eleven were taken at Railway Stations from milk cans consigned to Cardiff dealers, twenty-six from milk carts and dairies in the City, and two from Institutions. The five samples contained the mixed milk from 149 cows. Altogether the mixed milk from 1,379 cows supplying the City were examined, including that from 149 cows in Cardiff cowsheds, and that from 1,230 cows in farms and cowsheds outside the City.

FOOD INSPECTION.—The inspection of meat at the Public Abattoirs has been carried out satisfactorily during the year, under the arrangements set forth in the Annual Report for 1909. Mr. J. P. Mullane, M.R.C.V.S., is the Chief Meat Inspector, with two Inspectors under his direction, each holding the Certificate for Inspectors of Meat and other Foods of the Royal Sanitary Institute. Since all the slaughtering of animals is carried on at the two municipal slaughter-houses, there is no difficulty in securing an efficient inspection of meat before it is sold for human consumption.

The Inspectors have directions to pay regard to the recommendations of the Select Committee of the House of Commons on the Tuberculosis (Animals) Compensation Bill, 1904, to the effect that, "If a butcher who is in possession of tuberculous meat has notified the fact to the proper authority as soon as he could be reasonably expected to be aware of it, the case should not be taken into Court." The principles laid down by the Royal Commission on Tuberculosis in their report of 1898, with respect to the degree of tubercular disease which should cause a carcase or part thereof to be seized, are observed, although generally no difficulty is experienced in obtaining the owner's consent to the destruction of meat found to be unfit for food, either by reason of tuberculosis or other conditions.

Mr. G. M. McGregor, Certified Inspector of Meat and Other Foods, who was formerly a butcher, acts in the capacity of Inspector of Meat and other Foods in shops, markets and wholesale stores within the City, and assists in the inspection of meat at the slaughter-houses.

In connection with meat inspection, the facilities provided at the Public Health Laboratory are utilized for the purpose of diagnosis.

In the following tabular statements particulars are given with reference to diseased or unsound food dealt with during the past year.

TABLE XLI.

Animals slaughtered at the Municipal Slaughter-houses during the year 1916 :—

	Roath Abattoir	Canton Abattoir	Totals
Cattle	11,430	809	12,239
Sheep and Lambs	44,697	5,831	50,528
Calves	8,843	296	9,139
Pigs	21,900	1,932	23,832
Totals	86,870	8,868	95,738

TABLE XLII.

Unsound carcases of meat surrendered at Abattoirs and destroyed by arrangement with the owners :—

Place	Carcases of				Totals
	Beef	Mutton and Lamb	Veal	Pork	
Roath Abattoir	156	77	40	59	332
Canton Abattoir	2	4	...	8	14
Totals	158	81	40	67	346

TABLE XLIII.

Causes of destruction of carcases :—

Cause	Beef	Mutton and Lamb	Veal	Pork	Totals
Asphyxiation	...	2	1	1	4
Congestion	1	3	1	...	5
Cerebro Spinal Meningitis	1	...	...	...	1
Decomposition	1	3	...	...	4
Dropsy	5	16	...	1	22
Dropsy and Emaciation	2	11	...	2	15
Emaciation	3	4	1	1	9
Found Dead	1	26	22	3	52
Gangrene	...	1	...	...	1
Jaundice	...	...	2	2	4
Johnés' Disease	2	...	...	...	2
Parturition	...	1	...	...	1
Pneumonia	...	1	1	...	2
Pyæmia	...	...	...	1	1
Prematurity	...	...	2	...	2
Rheumatism	...	2	...	7	9
Septicæmia	2	1	...	1	4
Septic Pleurisy and Pneumonia ...	...	6	1	...	7
Traumatism	1	...	...	...	1
Tuberculosis	141	...	9	47	197
Totals	160	77	40	66	343

TABLE XLIV.

Approximate weight of diseased or unsound meat surrendered at Abattoirs and destroyed by arrangement with the owners :—

	Whole Carcases	Part Carcases	Offals	Totals
	tons cwt. lbs.	tons cwt. lbs.	tons cwt. lbs.	tons cwt. lbs.
Beef	39 12 84	6 4 33	24 18 13	70 15 18
Veal	1 1 1	22	4 98	1 6 9
Mutton and Lamb	1 9 22	1 16	1 7 46	2 17 84
Pork	3 7 16	10 29	2 3 3	6 0 48
Totals ...	45 10 11	6 15 100	28 13 48	80 19 47

TABLE XLV.

Approximate weight of diseased or unsound food surrendered at shops and stores and destroyed or otherwise dealt with by arrangement with the owners :—

	tons	cwt.	lbs.
Beef	1	19	16
Veal, etc.			75
Mutton and Lamb, etc.		5	97
Pork, etc.	1	17	41
Eggs			70
Condensed Milk		2	74
Rabbits		5	8
Fish	4	6	59
Provisions	3	12	11
Vegetables	5	13	8
Fruit	10	13	44
Condensed Skim Milk		1	38
Total	28	17	93

TABLE XLVI.

Approximate weight of diseased or unsound food destroyed or otherwise dealt with, either by consent of the owners, or by Magistrates' Orders, in each year since 1896 :—

Year.	Food.			Year.	Food.		
	tons	cwt.	lbs.		tons	cwt.	lbs.
1896	1	14	88	1906	21	16	77
1897	4	16	72	1907	24	3	84
1898	4	8	73	1908	65	4	54
1899	6	6	93	1909	73	6	12
1900	9	9	49	1910	76	12	8
1901	15	0	96	1911	90	17	80
1902	19	9	107	1912	105	18	70
1903	18	12	46	1913	77	11	39
1904	18	11	54	1914	52	0	12½
1905	18	7	108	1915	83	14	17¼
				1916	109	17	28

TABLE XLVII.

Number of animals slaughtered and the number and proportion per cent. condemned at the Municipal Slaughter-houses during each of the years 1902 to 1916 :—

Year	Number of Animals Slaughtered	Number of Animals Condemned	Per cent. Condemned
1902	85,046	75	0·09
1903	81,258	77	0·09
1904	85,704	88	0·10
1905	80,558	84	0·10
1906	77,583	108	0·14
1907	79,733	90	0.11
1908	81,496	110	0·13
1909	87,438	117	0·13
1910	81,539	124	0·15
1911	81,898	149	0·18
1912	79,263	174	0·22
1913	74,845	167	0·22
1914	73,209	169	0·23
1915	85,343	257	0·30
1916	95,738	346	0·36

SALE OF FOOD AND DRUGS ACTS.—Samples submitted for analysis during the year 1916, to the Public Analyst, Mr. Thomas Hughes, F.I.C. :—

TABLE XLVIII.

Description.	Number Analysed.	Genuine	Adulterated
Arrowroot	3	3	...
Baking Powder	27	25	2
Beer	6	6	...
Bread	3	3	...
Butter	67	65	2
Cheese	10	10	...
Cream	50	40	10
Coffee	10	10	...
Cornflour	3	3	...
Demerara Sugar	8	8	...
Egg Powder	1	...	1
Flour	6	6	...
Flour (self-raising)	12	12	...
Lard	24	24	...
Milk (skimmed)	4	4	...
Milk	580	530	50
Margarine	18	14	4
Pepper	4	4	...
Rice	6	5	1
Sugar	8	8	...
Totals	850	780	70

TABLE XLIX.

Legal Proceedings under the Sale of Food and Drugs Acts :—

No. of Sample	Description.	Adulteration.	Fines.	Remarks.
842	Milk ...	12·7% added water ...	Fined 10/–	
37	,, ...	6·7% deficient in fat ...	... ...	Case dismissed.
62	,, ...	28·0% ,, ,, ...	£5	
73	,, ...	2·0% ,, ,, ...	To pay costs (6/–) ...	
74	,, ...	19·3% ,, ,, ...	To pay costs (10/–) ...	
180	,, ...	3·9% added water ...	£1	
191	,, ...	12·1% ,, ,, ...	£2 or 14 days	
242	,, ...	19·0% deficient in fat ...	£2	
243	,, ...	19·5% added water ...	£5	
256	,, ...	7·0% deficient in fat ...	£2 or one month ...	
261	,, ...	7·3% ,, ,, and 5·0% of added water	£3 or one month ...	
262	,, ...	30·3% deficient in fat ...	... ...	Dismissed on warranty
280	,, ...	10·0% ,, ,, and 2·0% of added water	£2	
282	,, ...	22·0% added water ...	£20	
303	,, ...	10·0% deficient in fat ...	£3 or one month ...	
310	,, ...	9·0% ,, ,, ...	£1	
311	,, ...	7·0% ,, ,, ...	£1 or one month ...	
312	,, ...	2·0% ,, ,, ...	To pay costs (4/–) ...	
313	,, ...	20·3% ,, ,, and 3·6% of added water	£20	
314	,, ...	20·7% deficient in fat and 3·0% of added water	To pay costs (4/–) ...	
328	,, ...	2·0% added water ...	£10 and 4/– costs ...	
329	,, ...	39·7% deficient in fat ...	£10 and 4/– costs ...	
344	,, ...	9·0% deficient in fat ...	To pay costs (5/–) ...	
,,	,, ...	,, ,, ,, ...	,, ,, ...	
380	,, ...	13·8% added water ...	£2	
384	,, ...	15·3% ,, ,, and 25·7% deficient in fat	To pay costs (5/–) ...	
420	,, ...	9·3% ,, ,, ...	... ...	Case dismissed.
424	Margarine ...	No label attached ...	£1	
,,	,, ...	Sold in plain wrapper ...	To pay costs (5/–) ...	
,,	,, ...	,, ,, ...	,, ,, ...	
425	,, ...	,, ,, ...	£5	
427	,, ...	,, ,, ...	£5	
428	,, ...	,, ,, ...	To pay costs (5/–) ...	
487	Milk ...	9·7% deficient in fat ...	£2	
488	,, ...	9·7% ,, ,, ...	... ...	Case withdrawn
569	,, ...	26·0% ,, ,, ...	£5	
,,	,, ...	,, ,, ,, ...	£5	
597	,, ...	0·027% of boric acid ...	To pay costs (5/–) ...	

TABLE L.

In the following cases Legal Proceedings were not taken :—

No. of Sample	Description	Adulteration	Remarks
17	Milk	1·0% of added water ...	Proceedings not recommended
18	,, ...	2·3% ,, ,, ...	Ditto
32	,, ...	13·0% ,, ,, ...	Ditto
192	,, ...	2·8% ,, ,, ...	Ditto
215	Butter	100 % margarine	Informal sample
297	Rice	Lightly faced with mineral matter	Ditto
323	Milk	9·3% of added water and 30·0% deficient in fat ...	Proceedings not recommended
345	,, ...	2·0% deficient in fat ...	Ditto
457	,, ...	3·5% added water and 11·7% deficient in fat ...	Ditto
506	,, ...	12·1% added water, and 13·0% deficient in fat ...	Informal sample
541	,, ...	1·0% ,, ,, ...	Proceedings not recommended
576	,, ...	4·0% ,, ,, ...	Ditto
606	,, (skimmed) ...	2·4% of added water ...	Ditto
636	,, ...	1·2% ,, ,, ...	Ditto
709	Butter	0·2% excess of water ...	Informal sample
732	Baking Powder ...	Contained $\frac{1}{100}$ grain of arsenic per lb.	Ditto
739	,, ...	Contained $\frac{1}{70}$ grain of arsenic per lb.	Ditto
843	Milk	1·0% of added water ...	Proceedings not recommended

Legal Proceedings are not taken in cases of Milk in which the percentage of adulteration is very small.

TABLE LI.

Samples of milk analysed and proportion adulterated :—

	Samples Analysed	Samples Adulterated.					
		Number.	Percentage.	Added Water	Deficient Fat.	Added Water and Deficient Fat.	Preservatives
Wholesale—							
Taken at Railway Stations	96	4	4·1	2	2	...	...
Retail—							
Taken in shops, from carts, etc.	488	46	9·4	25	20	...	1
Totals	584	50	8·5	27	22	...	1

FACTORY AND WORKSHOP ACT, 1901.—Under Section 132 of the Factory and Workshop Act, 1901, the Medical Officer of Health is required in his annual report to deal specifically with the administration of the Act (so far as the matters under the charge of the Sanitary Authority are concerned), and to send a copy of this report to the Secretary of State.

The Inspectors of Workshops made altogether 1,478 visits of inspection to factories, workshops, etc., during the year. 98 notices regarding nuisances or sanitary defects were served, and 87 notices were complied with. Details of the work carried out under the Act are set forth in Tables LII. to LV. in this Report.

TABLE LII.

1.—Inspection of Factories, Workshops and Workplaces.

Premises.	Number of		
	Inspections	Written Notices.	Prosecutions.
Factories (including Factory Laundries)	224	26	...
Workshops (including Workshop Laundries)	1,141	70	...
Workplaces (other than Outworkers' premises included in Part 3 of this Report)	120	...	...
Total	1,485	96	...

2.—Defects Found in Factories, Workshops and Workplaces.

Particulars.		Number of Defects	
		Found.	Remedied.
Nuisances under the Public Health Acts :—			
Want of cleanliness		33	31
Want of ventilation		—	—
Overcrowding		1	1
Other nuisances		73	55
Sanitary accommodation ...	insufficient	3	1
	unsuitable or defective ...	14	10
	not separate for sexes ...	10	9
Breach of special sanitary requirements for bakehouses (Sec. 97 to 100)		5	11
Total		139	118

In the foregoing table, where the number of defects remedied exceed those found, the defects were found in 1915, and remedied in 1916.

TABLE LII.—con.

3.—Home Work.

Nature of Work.	Outworkers' Lists, Section 107.							Outwork in Unwholesome Premises, Section 108.		Outwork in Infected Premises, Sections 109, 110	
	Lists received from Employers.						Notices served on Occupiers as to keeping or sending lists.	Instances.	Notices served.	Instances.	Orders made (S. 110).
	Sending twice in the year.			Sending once in the year.							
	Lists.	Outworkers.		Lists.	Outworkers.						
		Contractors	Workmen.		Contractors	Workmen.					
Wearing Apparel—											
(1) making, etc. ...	35	...	88	22	...	86	68	8	8	17	—
(2) cleaning & washing	...	...	...	...	...	...	...	...	...	...	...

4.—Registered Workshops.

Workshops on the Register (S. 131) at the end of the Year.	Number.
Bakers	158
Bootmakers	172
Dressmakers and Milliners	229
Laundries	46
Tailors	102
Miscellaneous	382
Total number of Workshops on Register ...	1,089

5.—Other Matters.

Class	Number
Matters notified to H.M. Inspector of Factories :—	
Failure to affix Abstract of the Factory and Workshop Act (Sec. 133) ...	7
Action taken in matters referred by H.M. Inspectors as remediable under the Public Health Acts but not under the Factory Act :—	
Notified by H.M. Inspector	21
Reports (of action taken) sent to H.M. Inspector	13
Other (Notices of Occupation of Workshops received from H.M. Inspector) ...	28
Underground Bakehouses in use at the end of the year	3

TABLE LIII.

Factories and workshops on the registers at the end of the year 1916, the number of inspections made, and the number of notices served during the year :—

	Number on Registers	Number of Inspections	Number of Notices Served
WORKSHOPS :—			
Bakers...	158	441	10
Bootmakers	111	107	4
Dressmakers and Milliners	187	85	9
Laundries	41	86	6
Tailors	88	46	2
Miscellaneous	339	283	22
DOMESTIC WORKSHOPS :—			
Bootmakers	61	21	...
Dressmakers and Milliners	42	7	...
Laundries	5	...	...
Tailors	14	4	...
Miscellaneous	43	2	...
WORKPLACES :—			
Miscellaneous	472	111	7
OUTWORKERS' PREMISES :—			
Tailors	229	62	15
Miscellaneous	...	...	...
FACTORIES :—			
Bakers	29	51	2
Bootmakers	15	6	1
Laundries	20	16	3
Miscellaneous	455	150	17
Totals	2,309	1,478	98

TABLE LIV.

Nuisances in Factories, Workshops, &c. during the Year 1916.

Nuisances.	Bakehouses.		Bootmakers' Premises.		Dressmakers' and Milliners' Premises.		Laundries.		Tailors' Premises.		Outworkers' Premises.		Miscellaneous.		Totals.	
	Found	Remedied	Found	Remedied	Found	Remedied	Found	Remedied	Found	Remedied	Found	Remedied	Found	Remedied	Found	Remedied
Want of cleanliness	5	2	...	...	3	2	2	3	4	4	3	8	16	12	33	31
Want of ventilation	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Overcrowding	...	...	...	...	...	...	...	...	...	...	...	...	1	1	1	1
Want of drainage of floors	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Sanitary Accommodation — Insufficient ...	...	...	...	...	...	...	...	...	...	...	1	...	2	1	3	1
Sanitary Accommodation — Unsuitable or defective ...	1	2	...	...	1	1	1	1	...	...	1	1	10	5	14	10
Sanitary Accommodation — Not separate for sexes ...	...	...	...	...	1	...	...	...	...	...	3	1	6	8	10	9
Defective or choked drains	...	3	...	...	...	...	1	1	...	...	3	2	6	5	10	11
Defective syphon traps	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Defective gully traps	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Want of flushing apparatus	1	1	...	...	...	...	...	...	...	...	...	...	...	...	1	1
Defective flushing apparatus	...	1	...	...	1	1	...	...	1	1	2	...	5	3	9	6
Defective yard surfaces	...	...	...	...	1	1	...	...	...	...	1	...	1	1	3	2
Offensive accumulations	...	...	...	...	...	...	1	...	1	1	...	...	4	7	6	8
Want of manure receptacles ...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Defective manure receptacles ...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Other nuisances	4	6	4	5	3	2	2	4	2	2	16	12	18	7	49	38
Totals	11	15	4	5	10	7	7	9	8	8	30	24	69	50	139	118

SHOPS ACTS, 1912 and 1913.—The Shops Act, 1912, which came into operation on 1st May, 1912, repealed the Shops Regulation Acts, 1892-1911. It re-produces without change of substance the provisions of previous Acts dealing with Shops, from the Shop Hours Act, 1892, down to and including the Shops Act, 1911. Amongst other provisions, the Act provides that every shop-assistant must be allowed a half-holiday, and must be given intervals for meals and rest. The hours of employment of young persons under 18 years of age are regulated under the Act. Provision is also made requiring employers to provide seats for female shop-assistants. Shop-keepers are required to close their shops at 1 p.m. on one week-day in every week, unless it is exempted on one of the grounds mentioned in the Act. The local authority have power to make an Order for any class of shop with the consent of the occupiers of two-thirds of the shops of the class, fixing the hour on each day of the week (other than the half holiday) at which the shops are to close; the hour fixed must not be earlier than 7 p.m. Such Closing Orders cannot, however, apply to certain classes of business which are exempt. The Shops Act, 1913, alters the provisions of the Act of 1912 with reference to the meal times and half-holidays of assistants employed in the sale of refreshments, without reducing the time to be set apart for such meal times and half-holidays.

TABLE LV.

Closing Orders fixing the closing time of shops in operation in Cardiff, and number of inspections and infringements thereunder during the year 1916 :—

No. of Order	Trade	Area	Inspections	Infringements
1	Barbers	Whole City	345	1
2	Bootmakers	Grangetown	8	...
3	Bootsellers	Central Area	231	1
4	,, ...	Roath, Cathays and Park	40	...
5	,, ...	Riverside and Canton ...	24	—
6	Goldsmiths, etc.	Central Area	224	1
7	Pawnbrokers	,, ,, ...	24	...
8	Goldsmiths, Pawnbrokers, etc. ...	Whole of City, except Central	49	...
9	General and Fancy Drapers, Milliners, etc.	East of Taff Vale and Rhymney Railways ...	77	...
10	Toys or Fancy Goods	Central Area	51	...
11	Pharmacists, Chemists, and Druggists	Whole of City, except South	123	...
12	Ironmongers, Iron and Steel Sellers, etc.	Park Ward	6	...
13	Hay, Corn, Seed Merchants, etc. ...	Whole City	100	2
14	Bespoke Tailors	Central Area	20	...
		Totals	1,322	5

Other inspections and infringements under the Shops Act, 1912, during the year 1916 :—

Number of Shops visited	2,817
Number of observations of shops...	1,498

Infringements with reference to :—

Assistants' meal times	...
Assistants' half-holiday	29
Employment of young persons	...
Seats for female shop-assistants	...
Closing of shops for weekly half-holiday	66

Most of the above infringements were in connection with notices which shop-keepers are required to affix in the interior and on the exterior of their shops.

TABLE LVI.

Summary of Legal Proceedings.

Proceedings taken under	Number	Fined	Cautioned	To pay Costs only	Dismissed	Withdrawn	Amount of Fines
Sale of Foods and Drugs Acts ...	48	25	6	11	4	2	£115 17s. 0d., including costs
Shop Hours Acts	...	...	...	...	...	...	
Public Health Acts, 1875, Sec. 95...	7	4	...	1	...	2	£11 5s. 0d. ,,
Towns Improvement Clauses Act, 1847 (Sec. 74)	...	...	...	...	...	...	
Midwives Act, 1902	...	...	...	...	...	...	
Totals ...	55	29	6	12	4	4	£127 2s. 0d.

SANITARY INSPECTION OF DISTRICT.—The general sanitary inspection of the district, inspection of factories, and workshops, inspection of shops under the Shops Acts, inspection of seamen's and common lodging houses, the inspection of meat and other food in shops and stores, and the taking of samples for analysis under the Sale of Food and Drugs Acts, were carried out during the year 1916 by Mr. S. Evans, Chief Inspector of Nuisances, with the assistance of eight Assistant Inspectors.

For the purposes of inspection, the City is divided into six districts, as follows :—

District No. 1.—Canton and Riverside Wards.
,, No. 2.—Splott Ward and part of Adamsdown Ward.
,, No. 3.—Park Ward and part of Cathays Ward.
,, No. 4.—Central Ward and parts of Cathays and South Wards.
,, No. 5.—Grangetown Ward and part of South Ward.
,, No. 6.—Roath Ward and part of Adamsdown Ward.

The following statement, in addition to other tables in this report, shows the nature and extent of the work performed by the Chief Inspector and his Assistants.

Summary of Sanitary Inspection of Dwelling Houses, &c., During the Year 1916 :—

Complaints of Nuisances received	866
Houses, etc., inspected	6,095
House-to-house inspections (including testing of drains)	1,623*
Re-inspections of houses, etc.	17,905
Drains tested with smoke	154
,, ,, chemicals	697
Notices served :—	
Informal	2,687*
Statutory	72*
Notices complied with :—	
Informal	2,572*
Statutory	59*
Towns Improvement Clauses Act, 1847 :—	
Notices *re* defective shutes served	83
,, ,, ,, complied with	109

*Including inspections and notices referred to in Table LVII.

In connection with the sanitary inspection of dwelling houses, 4,453 sanitary defects were remedied, details of which are given below :—

Drains unchoked and repaired	604
Soil pipes, ventilation shafts and fresh air inlets repaired	25
New W.C. pans provided	52
New syphon traps provided	13
New gully traps provided	6
W.C.s repaired	22
W.C.s cleansed	33
Flushing apparatus provided	5
,, ,, repaired	42
Trough outlets repaired	66
Roofs repaired	1,001
Shutes repaired	872
Down-pipes repaired	82
Chimneys repaired	52
Inside plastering repaired	168
Outside ,, ,, ...	94
Areas repaired	18
Yard surfaces repaired	298
Yards, &c., cleansed	2
Outhouses cleansed or repaired	9
Accumulations removed	78
Manure receptacles provided	—
,, ,, repaired	4
Boundary and party walls repaired	19
Doors repaired	84
Floors repaired	213
Windows repaired	217
Ceilings repaired	63
Houses, bedding, etc., cleansed	73
Ventilation improved	2
Water supply provided	42
Overcrowding abated	30
Other Nuisances abated	164

Particulars as to the inspection of premises periodically inspected during the year 1916 are herewith given :—

OFFENSIVE TRADES :—	
Number on Register	36
Inspections	258
Notices served	7
Notices complied with	6
DAIRIES, COWSHEDS AND MILKSHOPS :—	
Milkshops on Register	391
Cowsheds on Register	8
Inspection of milkshops	1,653
,, cowsheds	88
Notices served	35
Notices complied with	33
SHOPS, STORES, &c. :—	
Inspections of butchers' shops	1,551
,, provision shops	497
,, markets	765
,, wholesale stores	1,141
,, fish and fruit shops	1,163
,, storage premises	261
,, army stores	92
Other inspections	335

Miscellaneous Inspections :—	
Public Houses	180
Notices served	20
Notices complied with	16
Theatres, etc.	10
Notices served	2
Notices complied with	2
Fried-fish Shops	408
Notices served	13
Notices complied with	12
Ice-cream Shops	623
Notices served	12
Notices complied with	12
Inspections of Urinals	71
Visits to owners *re* notices	462
Common Lodging Houses :—	
Common Lodging Houses on Register	26
Day Inspections	1,945
Night Inspections	20
Notices served	80
Notices complied with	57
Seamen's Lodging Houses :—	
Seamen's Lodging Houses on Register	152
Licences granted	227
Licences relinquished	67
Day Inspections	4,084
Night Inspections	52
Notices served under Byelaws	120
Notices under Byelaws complied with	84
Notices served under Public Health Acts	32
Notices under Public Health Acts complied with	24
Persons cautioned for lodging seamen without being licensed ...	38
Legal proceedings for lodging seamen without being licensed ...	1

TABLE LVII.

Statement regarding houses inspected under the Housing, Town Planning, etc., Act, 1909, during the year 1916 :—

Street	Houses Inspected	Notices re Defects Served		Notices re Defects complied with		Houses with Rent exceeding £26 a year	No Rent paid	Tenants changed since December, 1909
		Owners	Occupiers	Owners	Occupiers			
Ascog Street	32	5	...	5	...	...	...	18
Avon Street	45	23	18	9	6	...	...	36
Blanche Street	47	29	...	1	...	1	...	22
Beresford Road	40	12	...	12	...	3	2	17
Christina Street	57	20	15	18	9	8	4	19
Cairns Street	191	82	3	38	1	...	...	110
Cumnock Place	15	4	...	...	...	...	...	12
Crofts Street	27	11	3	9	2	5	1	14
Darran Street	23	14	1	3	...	...	2	14
Dalton Street	30	7	1	5	1	9	1	15
Eldon Street	191	51	4	30	1	99	10	37
Elm Street	46	20	2	...	...	25	5	10
Fanny Street	13	4	1	2	1	1	...	4
Frances Street	26	9	5	6	1	3	...	8
Gwendoline Street	29	7	1	5	1	...	...	18
Gladys Street	10	3	1	3	1	...	...	8
Hinton Street	24	...	...	...	...	16	5	3
Harold Street	48	17	...	6	...	1	2	14
Howard Street	26	...	...	...	...	2	...	13
Jonker's Court	3	3	4	3	2	...	...	3
Kerryeroy Street	14	1	2	1	2	...	...	9
Kilcattan Street	32	3	1	3	1	...	...	21
Lady Margaret Terrace	22	2	...	...	...	...	...	17
Mansfield Street	14	6	...	2	...	4	2	6
Minny Street	84	41	6	21	4	2	2	34
Maria Street	43	14	5	2	1	19	4	12
May Street	96	49	2	37	1	5	11	43
Nelson Street	21	10	3	7	5	3	...	11
Pontypridd Street	68	9	1	7	...	2	...	35
Peel Street	37	20	9	6	2	4	1	28
Penllyn Road	26	5	...	4	...	4	6	12
Sapphire Street	53	14	...	7	...	20	3	10
Spring Gardens Place	52	8	...	8	...	3	1	32
Spring Gardens Terrace	39	16	...	10	...	2	2	18
Singleton Road	36	5	...	5	...	15	2	10
Thomas Terrace	5	...	...	...	...	...	...	2
Whitchurch Place	18	5	...	4	...	1	2	8
West Church Street	11	4	1	2	1	...	...	9
Totals	1,594	533	89	281	43	257	68	712

The Notices referred to in the foregoing Table were served under the Public Health Acts. Only those houses let after the passing of the Housing, Town Planning, etc., Act, in December, 1909, at a rent not exceeding £26 a year can be dealt with under Sec. 15 (3) of the Act, as regards their being kept in all respects reasonably fit for human habitation. Of 622 Notices served during the year 1916, 298 remained uncomplied with at the end of the year; of these 252 were served upon owners, and 46 upon occupiers.

TABLE LVIII.

The following Table shows the number of habitable rooms in 9,011 houses in Cardiff, let at 10/– per week and under (inclusive), inspected during the years 1911, 1912, 1913, 1914, 1915 and 1916, and the rent paid for such houses :—

No. of Rooms.	Rent of House per week.																												Total No. of Houses.
	2/9	3/–	3/3	3/6	3/9	4/–	4/3	4/6	4/9	5/–	5/3	5/6	5/9	6/–	6/3	6/6	6/9	7/–	7/3	7/6	7/9	8/–	8/3	8/6	8/9	9/–	9/3	9/6	9/9	10/–	
2	...	1	2	7	2	24	1	18	1	28	...	7	...	4	...	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	96
3	1	1	6	...	...	9	...	18	7	15	13	8	1	2	...	...	3	1	...	1	...	...	...	...	...	...	...	1	...	1	88
4	3	1	...	...	124	5	3	47	7	227	48	233	27	383	55	234	98	247	44	63	8	36	2	14	...	11	2	6	...	7	1,935
5	...	...	...	...	...	3	...	52	...	90	9	50	1	93	16	167	52	237	39	140	27	122	47	40	5	40	...	14	...	23	1,267
6	...	...	...	...	...	...	1	8	5	70	1	75	4	149	14	423	81	676	149	554	102	724	89	529	51	427	43	211	18	296	4,700
7	...	...	...	...	...	...	...	1	...	2	...	2	1	5	...	9	2	54	2	32	...	80	1	115	8	190	26	58	20	203	811
8	...	...	...	...	...	...	...	...	...	...	...	...	...	1	...	2	...	5	1	1	...	32	...	4	...	12	...	5	2	27	92
9	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	4	...	...	...	8	...	1	...	5	18
10	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1	...	...	...	...	...	...	...	2	3
13	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1	...	1
Total No. of Houses.	4	3	8	7	126	41	5	144	20	432	71	375	34	637	85	836	236	1220	235	791	137	999	139	702	64	688	71	296	41	564	9,011

Tables LIX. and LX. show the number of unfurnished rooms sub-let in 2,899 houses, let at rentals of 6/6 per week and under, and the number of furnished rooms sub-let in 223 houses and their weekly rentals.

In other words, out of 9,011 houses inspected, parts of 2,899 were sub-let unfurnished, and parts of 223 were sub-let furnished.

TABLE LIX.

The following Table shows the number of habitable rooms in 2,899 tenements (which are sub-let unfurnished) and the weekly rent paid for such tenements :—

No. of Rooms	Rent of Tenement per Week.																		No. of Tenements
	1/–	1/3	1/6	1/9	2/–	2/3	2/6	2/9	3/–	3/3	3/6	3/9	4/–	4/3	4/6	4/9	5/–	5/6	6/–	6/6	
1	14	3	123	10	151	3	81	...	42	...	8	...	6	...	...	...	2	1	...	...	444
2	1	...	24	1	55	2	175	19	487	26	622	49	409	13	66	4	38	3	1	1	1996
3	...	...	...	...	5	1	12	1	35	12	67	15	134	9	57	2	38	6	4	...	398
4	...	...	...	...	1	...	3	...	3	3	5	1	9	2	5	2	13	1	3	1	52
5	...	...	...	...	...	...	1	...	...	1	2	...	2	1	1	...	...	...	...	...	8
6	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1	...	...	...	1
	15	3	147	11	212	6	272	20	567	42	704	65	560	25	129	8	92	11	8	2	2899

TABLE LX.

The following Table shows the number of habitable rooms in 223 tenements (which are sub-let furnished), and the weekly rent paid for such tenements :—

No. of Rooms.	Rent of Tenement per Week.																	No. of Tenements.
	2/–	2/6	3/–	3/3	3/6	4/–	4/6	4/9	5/–	5/3	5/6	6/–	6/3	6/6	7/–	8/–	9/–	10/–	
1	4	7	9	1	11	68	7	10	19	1	1	5	...	...	...	2	...	1	146
2	2	2	2	...	7	13	11	4	14	...	1	5	1	1	...	2	1	1	67
3	...	...	...	...	...	5	...	1	1	...	...	...	...	...	1	...	...	1	9
4	...	...	...	...	...	...	...	...	...	...	...	1	...	...	...	...	...	...	1
No. of Tenements.	6	9	11	1	18	86	18	15	34	1	2	11	1	1	1	4	1	3	223

During the routine inspection of the district in 1913, 83 cases of overcrowding were reported, in 1914, 52 cases were found, in 1915, 36 cases, and in 1916, 30 cases.

By the term overcrowding is meant cases in which the number of persons living in a room exceeds two, and in which the air space is less than 300 cubic feet per person.

DISINFECTING STATION, CLEANSING STATION, and MORTUARY.—The new Disinfecting and Cleansing Station was completed and opened in June, 1912. The Station is situated on land adjacent to the Mortuary.

The accommodation of the Cleansing Department comprises separate baths and rooms for males and females. Each side contains a bath-room, waiting-room, and dressing-room, with all the necessary appliances.

The Cleansing of Persons Act, 1897, permits Sanitary Authorities to provide Cleansing Stations and apparatus for cleansing verminous persons and their garments free of charge, upon the application of such persons. The Children Act provides that where the Sanitary Authority has made this provision, the Education Authority may avail themselves of it for enforcing the requirement as to the compulsory cleansing of verminous school children.

The cleansing of school children, when necessary, is done by School Nurses. During the year 1916, the number of children cleansed at the Cleansing Station amounted to 26; of these, 2 were verminous and 24 suffered from scabies. In all cases the children's bedding and clothes were disinfected, and the rooms occupied by them were also cleansed and disinfected by the Disinfectors.

Infected premises are disinfected either by fumigation with sulphur dioxide, formaldehyde, or by means of a spray of formalin. Articles of clothing and bedding are removed from the house in which the infectious disease occurred to the Disinfecting Station, and submitted to disinfection by saturated steam in a Washington Lyon's high pressure steam disinfecting apparatus.

During the year the routine disinfection comprised the following :—

Houses disinfected	1,317
School class-rooms disinfected	...
Articles of bedding, clothing, etc., disinfected	10,367
,, ,, ,, destroyed	228
,, soldiers clothing, etc., disinfected	12,396

The number of bodies removed to the Mortuary during the year was 94 (75 males and 19 females). The number of post-mortem examinations performed was 37.

CARDIFF AND COUNTY PUBLIC HEALTH LABORATORY.—The Laboratory forms part of the buildings of the University College, Cardiff, and is used for teaching purposes in connection with the Public Health Department of the College. It is maintained jointly by the Cardiff Corporation and the Glamorgan County Council, and the Medical Officers of these Authorities act as Directors of the Laboratory, having the use of it for bacteriological and chemical investigations connected with their administrative work. The Laboratory is under the immediate supervision of Mr. J. H. Sugden, M.Sc., F.I.C., The Chemist and Water Bacteriologist, and Mr. Walter Fearis, Bacteriologist.

The following statement shows the work carried out for Cardiff during the year 1916 :—

Bacteriological Examinations :—		
Water Supplies	211	
Suspected Diphtheria	207	
Suspected Typhoid Fever	54	
Paratyphoid A	4	
,, B	4	
Sputa for Tubercle Bacilli	549	
,, ,, ,, (Concentration Method)	3	
Urines ,, ,, ...	4	
Rodents for Plague	78	
Diseased Meat	8	
Bilharziasis	1	
Puerperal Septicæmia	2	
Dysentery	1	
Anthrax	3	
Gonococci	8	
Meingococci (Fluids)	8	
,, (Swabs)	34	
Milks for Tubercle Bacilli	44	
Other Examinations	4	
		1,227
Chemical Examinations :—		
Water Supplies		57
River Waters		2
Milk and Milk Products		39
Urine Analyses		2
Other Examinations		1
Total		1,328

The specimens for suspected diphtheria, typhoid fever, and tuberculosis submitted for examination from Cardiff, together with the results of such examinations, are shewn below :—

Nature of Examination	Positive Results	Negative Results	Total	Percentage of Positive Results
Suspected Diphtheria ...	65	142	207	31·4
,, Typhoid Fever ...	17	37	54	31·4
,, Tuberculosis ...	167	385	552	30·2

Mixed Milks from Cardiff examined for Tubercle Bacilli :—

Number examined	90
Positive	2
Negative	88
Percentage of positive results	2·2

Although the samples were all from milk supplies serving the City, the original sources of the milk were in most cases outside Cardiff.

Bacteriological examinations were made of 168 samples of drinking water from ships, submitted by the Cardiff Port Sanitary Authority, with the following results :—

Contaminated	17
Doubtful Purity	21
Satisfactory	102
Moderate	28

Samples of water from the various Cardiff reservoirs and filter beds were examined at frequent intervals, both bacteriologically and chemically, with the object of controlling the purity of the water supply at its source during transit, and in the service, in addition to testing the efficiency of the various filter beds. Samples of sand, deposit, and other material associated with the public water supply have also been examined. The action of the filtered water upon various metals has been tested and reported upon.

I have the honour to be,

My Lord Mayor and Gentlemen,

Your obedient Servant,

EDWARD WALFORD,

Medical Officer of Health.

APPENDIX.

CITY OF CARDIFF.

LOCAL GOVERNMENT BOARD TABLES. TABLE I.

VITAL STATISTICS OF WHOLE DISTRICT DURING 1916 AND PREVIOUS YEARS.

Year.	Population estimated to Middle of each Year.	Births.			Total Deaths Registered in the District.		Transferable Deaths.		Nett Deaths belonging to the District.			
		Uncorrected Number.	Nett.				of Non-residents registered in the District.	of Residents not registered in the District.	Under 1 Year of Age.		At all Ages.	
			Number.	Rate.	Number.	Rate.			Number.	Rate per 1,000 Nett Births.	Number.	Rate.
1	2	3	4	5	6	7	8	9	10	11	12	13
1911	182,729	4,744	4,730	25·8	2,671	14·6	189	112	639	135	2,594	14·1
1912	184,633	4,612	4,597	24·9	2,620	14·2	166	109	509	110	2,563	13·9
1913	186,554	4,912	4,900	26·2	2,618	14·0	181	130	566	115	2,567	13·7
1914	188,495	4,790	4,783	25·3	2,699	14·3	198	143	523	109	2,644	14·0
1915	188,495	4,653	4,645	24·6	2,790	14·8	145	163	495	106	2,808	14·8
1916	*184,900	4,389	4,375	23·6	2,609	14·1	213	150	392	89	2,546	13·7

* Civil population.

This Table is arranged to show the gross births and deaths in the district, and the births and deaths properly belonging to it with the corresponding rates. The rates are calculated per 1,000 of the estimated population.

In Column 6 are included the whole of the deaths registered during the year as having actually occurred within the district, but excluding the deaths of Soldiers and Sailors that have occurred in hospitals and institutions in the district.

In Column 12 is entered the number in Column 6, corrected by subtraction of the number in Column 8, and by addition of the number in Column 9. Deaths in Column 10 are similarly corrected by subtraction of the deaths under 1, included in the number given in Column 8, and by addition of the deaths under 1 included in the number given in Column 9.

"Transferable Deaths" are deaths of persons who, having a fixed or usual residence in England or Wales, die in a district other than that in which they resided.

Total population at all ages	182,259	At Census 1911.
Total families or separate occupiers	37,990	
Average number of persons per house	4·7	
Area of District in acres (land and inland water) ...	6,373	

TABLE II.

CASES OF INFECTIOUS DISEASE NOTIFIED DURING THE YEAR 1916.

NOTIFIABLE DISEASE.	Number of Cases Notified.								Total Cases Notified in each Locality.			Total Cases Removed to Hospital.
	At all Ages.	At Ages—Years.							East Cardiff Regis. Sub-Dist.	Central Cardiff Regis. Sub-Dist.	West Cardiff Regis. Sub-Dist.	
		Under 1.	1 to 5.	5 to 15.	15 to 25.	25 to 45.	45 to 65.	65 and upwards.				
Small-pox	51	...	5	11	10	16	9	...	17	33	1	50
Diphtheria (including Membranous Croup)	384	5	92	224	42	19	2	...	137	126	121	287
Erysipelas	90	3	2	4	9	25	37	10	34	20	36	...
Scarlet Fever	478	2	138	286	33	18	...	1	102	179	197	376
Typhus Fever	...	...	...	...	...	...	...	...	...	...	...	...
Enteric Fever	26	...	...	3	13	9	1	...	3	15	8	16
Relapsing Fever, Continued Fever	1c	...	...	...	...	1	...	...	...	1	...	1
Puerperal Fever	9	...	...	...	...	7	2	...	9	...	...	...
Cerebro-spinal Meningitis	5	...	1	2	1	1	...	...	2	1	2	1
Poliomyelitis	3	...	1	2	...	...	...	...	2	...	1	...
Ophthalmia Neonatorum	39	38	1	...	...	...	...	...	8	17	14	...
Pulmonary Tuberculosis	372	2	4	18	104	157	81	6	100	152	120	...
Other forms of Tuberculosis	141	11	20	62	22	23	2	1	39	49	53	...
Measles	1,799	68	867	798	40	25	1	...	615	567	617	...
Totals	3,398	129	1,131	1,410	274	301	135	18	1,068	1,160	1,170	731

TABLE III.

CAUSES OF AND AGES AT DEATH DURING THE YEAR 1916.

Causes of Death.	Nett Deaths at the subjoined ages of "Residents" whether occurring within or without the District.									Total Deaths whether of "Residents" or "Non-Residents" in Institutions in the District.
	All ages.	Under 1 year.	1 and under 2 years.	2 and under 5 years.	5 and under 15 years.	15 and under 25 years.	25 and under 45 years.	45 and under 65 years.	65 and upwards.	
1	2	3	4	5	6	7	8	9	10	11
All causes { Certified	2,545	392	103	87	111	153	383	595	721	625
All causes { Uncertified	1	...	...	...	...	...	...	...	1	...
Enteric Fever	5	...	...	...	1	...	4	...	...	...
Small-pox	3	...	1	...	1	1	...	...	...	3
Measles	20	5	9	5	1	...	...	...	...	...
Scarlet Fever	6	1	2	2	1	...	...	...	...	5
Whooping Cough ...	28	15	7	6	...	...	...	...	...	...
Diphtheria and Croup ...	34	2	...	14	18	...	...	...	...	21
Influenza	19	2	...	1	...	...	3	6	7	1
Erysipelas	...	...	...	...	...	...	...	...	...	...
Phthisis (Pulmonary Tuberculosis) ...	255	2	...	5	11	68	106	56	7	57
Tuberculous Meningitis ...	52	10	7	7	16	9	3	...	...	11
Other Tuberculous Diseases	39	8	5	3	5	6	8	4	...	15
Cancer, malignant disease	176	...	1	...	...	...	20	98	57	55
Rheumatic Fever ...	20	...	...	...	3	2	5	6	4	5
Meningitis	24	2	4	4	7	4	3	...	...	4
Organic Heart Disease ...	253	...	...	...	6	14	32	89	112	64
Bronchitis	163	21	8	4	3	1	10	46	70	14
Pneumonia (all forms) ...	213	44	29	10	4	10	28	47	41	39
Other diseases of Respiratory organs ...	38	1	2	6	2	1	7	10	9	3
Diarrhœa and Enteritis ...	75	63	9	2	...	...	...	...	1	3
Appendicitis and Typhlitis	10	...	...	...	2	1	2	4	1	10
Cirrhosis of Liver ...	17	...	...	...	...	1	3	11	2	5
Alcoholism	5	...	...	...	...	...	3	2	...	...
Nephritis and Bright's Disease	70	...	...	1	1	1	14	34	19	20
Puerperal Fever ...	7	...	...	...	...	...	7	...	...	3
Other accidents and diseases of Pregnancy and Parturition ...	10	...	...	...	...	3	6	1	...	5
Congenital Debility and Malformation, including Premature Birth ...	133	130	2	1	...	...	...	...	...	9
Violent Deaths, excluding Suicide	116	7	1	5	11	17	30	25	20	59
Suicide	12	...	...	...	...	1	7	3	1	1
Other Defined Diseases ...	730	79	16	11	15	12	81	147	369	210
Diseases ill-defined or unknown	13	...	...	...	3	1	1	7	1	3
Totals	2,546	392	103	87	111	153	383	596	721	625
Sub-entries :—										
Cerebro-spinal Meningitis	5	...	...	1	2	1	1	...	...	2
Poliomyelitis	1	...	...	...	1	...	...	...	...	...
Anthrax bacillus ...	1	...	...	...	...	...	1	...	...	...
Pneumonia (other than broncho-pneumonia)...	135	13	11	5	3	10	25	40	28	22

TABLE IV.

INFANT MORTALITY DURING THE YEAR 1916.

NETT DEATHS FROM STATED CAUSES AT VARIOUS AGES UNDER ONE YEAR OF AGE.

Cause of Death.	Under 1 week	1-2 weeks	2-3 weeks	3-4 weeks.	Total under 4 weeks.	4 weeks and under 3 months.	3 months and under 6 months.	6 months and under 9 months	9 months and under 12 months.	Total Deaths under 1 year
All causes { Certified ...	85	26	25	10	146	69	69	63	45	392
All causes { Uncertified ...	...	...	...	...	...	...	...	...	...	...
Small-pox ...	...	...	...	...	...	...	...	...	...	...
Chicken-pox ...	...	...	...	...	...	...	...	...	...	...
Measles	...	...	...	...	...	...	...	2	3	5
Scarlet Fever ...	...	...	...	...	...	...	...	1	...	1
Whooping Cough ...	...	...	...	...	...	...	1	10	4	15
Diphtheria and Croup	...	...	...	...	...	...	...	1	1	2
Erysipelas ...	...	...	...	...	...	...	...	...	...	...
Tuberculous Meningitis	...	...	...	...	...	1	6	1	2	10
Abdominal Tuberculosis	...	...	...	...	...	1	3	1	1	6
Other Tuberculous Diseases	...	...	...	...	...	1	1	...	...	2
Meningitis (not Tuberculous)	...	...	...	...	...	...	1	...	1	2
Convulsions ...	7	1	1	1	10	5	10	3	3	31
Laryngitis ...	...	...	...	...	...	...	1	...	...	1
Bronchitis ...	...	1	...	...	1	7	2	6	5	21
Pneumonia (all forms)	...	1	...	1	2	6	7	20	9	44
Diarrhœa ...	...	...	...	1	1	4	7	4	5	21
Enteritis ...	...	...	1	2	3	14	14	9	2	42
Gastritis	1	1	...	...	2	3	2	...	...	7
Syphilis	1	1	1	2	5	5	2	...	1	13
Rickets	...	...	...	1	1	...	...	...	2	3
Suffocation, overlying	2	...	...	...	2	1	...	...	...	3
Injury at birth ...	3	...	...	...	3	...	...	...	...	3
Atelectasis ...	2	...	...	...	2	...	...	...	...	2
Congenital Malformations	3	5	...	...	8	2	2	...	1	13
Premature Birth ...	42	5	12	...	59	5	...	1	...	65
Atrophy, Debility and Marasmus ...	20	9	4	1	34	10	5	2	...	51
Other Causes ...	4	2	6	1	13	4	5	2	5	29
Totals ...	85	26	25	10	146	69	69	63	45	392

Nett Births in the year { legitimate, 4,170. / illegitimate, 205.

Nett Deaths in the year of { legitimate infants, 367. / illegitimate infants, 25.

DEATHS FROM SPECIFIED CAUSES AT ALL AGES, AND AT EIGHT GROUPS OF AGES, IN CARDIFF, DURING THE YEAR 1916.

Causes of Death.	0 to 1		1 to 2		2 to 5		5 to 15		15 to 25		25 to 45		45 to 65		65 and upwards		All Ages			Rate per 1,000 living
	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	Total	
I.—General Diseases.																				
Enteric Fever	...	...	...	...	...	...	...	...	1	...	...	2	2	...	...	...	...	...	2	3	5	0·02
Small-pox (not vaccinated)	...	...	1	...	...	...	1	...	...	1	...	...	...	...	...	...	2	1	3	0·01
Measles	...	3	2	7	2	3	2	1	...	...	...	...	...	...	...	...	14	6	20	0·10
Scarlet Fever	...	1	...	1	1	1	1	...	1	...	...	...	...	...	...	...	3	3	6	0·03
Whooping Cough	...	8	7	6	1	1	5	...	...	...	...	...	...	...	...	...	15	13	28	0·15
Diphtheria and Membranous Croup	...	2	...	...	...	7	7	8	10	...	...	...	...	...	...	...	17	17	34	0·18
Influenza	...	1	1	...	...	1	...	...	...	...	3	...	5	2	5	2	14	5	19	0·10
Anthrax Bacillus	...	...	...	...	...	...	...	...	...	...	1	...	...	...	...	...	1	...	1	0·00
Malaria	...	...	...	...	...	...	...	...	...	...	1	...	...	...	...	...	1	...	1	0·00
Pyrexia Septicæmia	...	...	1	...	...	...	...	...	1	...	...	...	1	...	...	...	1	2	3	0·01
Pulmonary Tuberculosis (not acute)	...	1	1	...	3	2	3	8	24	42	52	53	36	19	5	2	124	127	251	1·35
Acute Miliary Tuberculosis	...	...	...	...	...	...	...	...	...	...	2	1	...	...	...	...	1	3	4	0·02
Tuberculous Meningitis	...	3	7	4	3	4	3	9	7	3	6	2	1	...	...	...	25	27	52	0·28
Tuberculosis of Peritoneum and Intestines	...	3	4	...	3	1	...	1	...	...	2	1	...	...	...	...	7	8	15	0·08
Tuberculosis of Spinal Column	...	...	...	1	...	...	...	...	...	1	...	1	1	1	...	...	4	2	6	0·03
Tuberculosis of Joints	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1	1	0·00
General Tuberculosis	...	1	...	1	...	2	...	1	2	3	2	1	2	1	...	...	10	6	16	0·08
Other forms	...	...	...	...	...	...	...	...	...	...	...	...	1	...	...	...	1	...	1	0·00
Rickets, Softening of Bones	...	1	2	1	...	...	...	...	...	...	...	...	...	...	...	...	2	2	4	0·02
Syphilis	...	7	6	...	...	2	...	...	...	...	...	1	2	...	...	...	11	7	18	0·09
Other Venereal Diseases	...	...	...	...	...	...	...	...	...	...	1	...	...	...	...	...	1	...	1	0·00
Cancer	...	...	...	1	...	...	...	...	...	...	8	12	51	50	29	25	89	87	176	0·95
Other Tumours	...	...	...	...	...	...	...	...	...	...	...	...	1	...	...	...	1	...	1	0·00
Rheumatic Fever	...	...	...	...	...	...	1	2	...	2	3	2	4	2	2	2	10	10	20	0·10
Chronic Rheumatism, Osteo-arthritis	...	...	...	...	...	...	...	...	...	...	...	2	1	2	3	4	4	8	12	0·06
Diabetes	...	...	...	...	...	...	...	...	1	...	...	3	4	4	4	12	10	22	0·11
Addison's Disease	...	...	...	...	...	...	...	...	...	...	...	...	1	1	...	...	1	2	3	0·01
Other General Diseases	...	...	...	...	...	...	...	...	...	...	...	...	1	1	...	...	1	1	2	0·01
Anæmia, Chlorosis	...	...	...	...	...	...	...	...	1	1	2	2	3	...	3	3	9	9	12	0·06
Alcoholism (acute or chronic)	...	...	...	...	...	...	...	...	...	...	1	2	2	...	...	...	3	2	5	0·02
Purpura	...	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1	...	1	0·00
II.—Diseases of the Nervous System and of the Organs of Special Sense :—																				
Encephalitis	...	...	...	...	...	...	...	...	...	...	...	...	2	1	...	...	2	1	3	0·01
Cerebro-spinal Fever	...	...	...	...	...	...	1	2	1	1	1	...	...	...	...	...	3	3	6	0·03
Meningitis, other forms or undefined	...	1	1	2	2	2	1	2	2	1	2	1	1	...	...	...	9	9	18	0·09
Locomotor Ataxy	...	...	...	...	...	...	...	...	...	...	1	...	3	...	1	4	4	1	5	0·02
Other Diseases of the Spinal Cord	...	...	...	...	...	...	...	1	...	...	...	...	1	...	2	4	3	4	7	0·03
Cerebral Hæmorrhage, Apoplexy	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Softening of Brain	...	1	...	...	...	...	...	1	...	...	3	1	23	18	30	28	57	48	105	0·56
Paralysis without specified cause	...	...	...	...	...	...	...	...	...	...	2	2	1	...	1	...	4	2	6	0·03
Hemiplegia	...	...	...	...	...	...	...	...	...	...	...	...	...	4	2	5	9	11	20	0·10
Paraplegia	...	...	...	...	...	...	...	...	...	...	...	...	1	...	...	...	1	...	1	0·00
Other forms of Paralysis	...	...	...	...	...	...	...	...	...	...	1	...	...	1	...	1	1	1	2	0·01
General Paralysis of the Insane	...	...	...	...	...	...	...	...	...	...	...	...	...	1	...	...	1	...	1	0·00
Epilepsy	...	...	...	1	...	...	...	...	1	...	1	9	3	...	1	1	15	1	16	0·08
Convulsions (Non-Puerperal : 5 years and over)	...	...	...	...	1	...	3	...	2	1	1	2	1	...	...	...	8	3	11	0·05
Infantile Convulsions (under 5 years)	...	18	13	2	6	...	...	2	...	...	...	...	...	...	...	...	20	2	22	0·01
Chorea	...	...	...	...	...	...	...	...	1	...	...	1	...	...	2	2	20	19	39	0·21
Hysteria, Neuralgia, Sciatica, Neuritis	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1	...	1	2	3	0·01
Other Diseases of the Nervous System	...	...	...	...	...	...	2	...	1	...	...	2	...	1	...	1	5	4	9	0·04
Mastoid Disease	...	...	...	...	1	1	1	1	...	1	...	1	1	...	...	...	4	3	7	0·03
III.—Diseases of the Circulatory System :—																				
Pericarditis	...	...	...	...	...	...	...	...	...	...	...	...	1	1	...	...	1	1	2	0·01
Endocarditis, Myocarditis	...	...	...	...	...	...	...	...	...	...	1	2	3	2	2	...	4	6	10	0·05
Valvular Disease	...	...	...	...	...	...	3	...	3	5	10	7	21	23	25	19	62	54	116	0·62
Fatty Degeneration of the Heart	...	...	...	...	...	...	...	...	...	...	...	...	...	1	...	1	1	2	3	0·01
Other Organic Disease of the Heart	...	...	...	...	...	...	...	3	3	3	8	6	30	14	35	32	76	58	134	0·72
Angina Pectoris	...	...	...	...	...	...	...	...	...	...	...	...	...	1	1	1	2	2	4	0·02
Aneurysm	...	...	...	...	...	...	...	...	...	...	...	...	1	1	1	1	2	2	4	0·02
Arterial Sclerosis	...	...	...	...	...	...	...	...	...	...	...	...	5	...	...	1	6	1	7	0·03
Cerebral Embolism and Thrombosis	...	...	...	...	...	...	...	...	...	...	...	...	3	...	3	5	6	5	11	0·05
Other Embolism and Thrombosis	...	...	...	...	...	...	...	...	...	...	1	1	1	1	1	1	3	3	6	0·03
Diseases of the Veins (Varicex, Hæmorrhoids, Phlebitis, etc.)	...	...	...	...	...	...	...	...	...	...	...	...	1	...	2	...	3	2	5	0·02
Diseases of the Lymphatic System	...	...	...	...	...	...	...	...	...	...	...	...	1	...	...	...	1	1	2	0·01
IV.—Diseases of the Respiratory System.																				
Laryngismus Stridulus	...	...	...	...	...	...	1	...	...	...	...	...	...	...	...	...	...	1	1	0·00
Laryngitis	...	1	...	...	1	2	...	...	...	...	...	...	...	...	...	...	3	3	6	0·03
Diseases of the Thyroid Body	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1	1	0·00
Bronchitis	...	10	11	2	6	3	1	2	1	...	1	6	4	25	21	38	32	86	77	163	0·88
Broncho Pneumonia	...	21	10	12	6	1	4	...	1	...	...	3	...	5	2	4	9	46	32	78	0·42
Lobar Pneumonia	...	1	...	2	3	1	...	...	1	2	2	9	2	17	3	6	1	36	12	48	0·27
Pneumonia (type not stated)	...	7	5	4	2	...	4	1	1	4	2	10	4	11	9	12	9	49	36	85	0·45
Pleurisy, Empyema	...	...	...	...	...	...	...	...	...	1	...	1	2	1	...	1	3	3	5	8	0·04
Pulmonary Congestion, Pulmonary Apoplexy	...	...	...	1	...	...	...	1	...	...	...	1	1	1	1	1	3	5	8	0·04
Asthma	...	...	...	...	...	...	1	...	...	...	1	1	3	3	1	...	5	5	10	0·05
Pulmonary Emphysema	...	...	...	...	...	...	...	...	...	...	...	...	1	...	...	...	1	...	1	0·00
Fibroid Disease of Lung	...	...	...	...	...	...	...	...	...	...	...	...	...	1	1	...	1	1	2	0·01
V.—Diseases of the Digestive System.																				
Diseases of the Mouth and Annexa, Thrush	...	1	...	...	...	...	...	...	...	...	...	...	...	1	...	...	1	1	2	0·01
Diseases of Pharynx, Tonsillitis	...	...	...	...	1	...	...	...	...	...	2	...	...	1	...	...	2	2	4	0·02
Diseases of Œsophagus	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1	1	1	2	0·01
Perforating Ulcer of Stomach	...	...	...	...	...	...	...	...	...	...	3	2	3	...	1	...	7	2	9	0·04
Inflammation of Stomach	...	4	3	1	1	1	...	2	...	1	2	...	1	2	2	9	11	20	0·10
Other Diseases of the Stomach	...	...	1	...	...	...	...	...	...	...	1	...	1	1	3	1	4	4	8	0·04
Diarrhœa and Enteritis	...	38	25	5	4	2	...	...	1	...	...	1	...	...	...	1	43	32	75	0·40
Appendicitis	...	...	...	...	...	...	...	2	1	...	1	1	3	1	...	1	5	5	10	0·05
Hernia	...	...	1	...	...	...	...	...	...	...	...	...	2	...	1	1	4	1	5	0·02
Intestinal Obstruction	...	2	1	...	...	...	...	...	...	...	...	...	2	1	1	...	5	1	6	0·03
Other Diseases of the Intestines	...	1	...	...	...	2	...	1	...	...	2	1	2	2	1	1	4	8	12	0·06
Cirrhosis of Liver	...	...	...	...	...	...	1	...	1	...	3	...	9	2	1	1	14	3	17	0·09
Other Diseases of the Liver	...	...	...	...	...	1	...	...	...	...	...	1	1	...	1	...	3	1	4	0·02
Peritonitis (cause unstated)	...	...	...	...	...	...	1	...	...	...	1	2	3	1	1	...	6	3	9	0·04
Other Diseases of the Digestive System	...	...	...	1	...	...	...	1	...	...	...	1	3	2	...	1	4	5	9	0·04
Enteritis	...	...	...	...	...	1	...	...	...	...	...	2	...	...	...	...	2	1	3	0·01
VI.—Non-Venereal Diseases of the Genito-Urinary System and Annexa.																				
Acute Nephritis	...	...	...	...	...	...	1	...	1	...	1	...	4	3	7	6	4	1	18	10	28	0·15
Bright's Disease	...	...	...	...	...	...	...	...	...	...	...	...	4	3	15	5	10	5	29	13	42	0·22
Other Diseases of the Kidney and Annexa	...	...	...	...	...	...	...	...	...	...	...	...	...	1	...	...	...	...	...	3	3	0·01
Diseases of the Bladder	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1	1	...	2	1	3	0·01
Diseases of the Urethra, Urinary Abscess, etc.	...	...	...	...	...	...	...	...	...	...	...	...	...	1	...	3	...	4	...	4	0·02
Diseases of the Prostate	...	...	...	...	...	...	...	...	...	...	...	...	...	1	...	8	...	9	...	9	0·04
Other Diseases of the Uterus	...	...	...	...	...	...	...	...	...	...	...	...	4	...	1	...	5	...	5	6	0·03
Ovarian Cyst, Tumour (Non-Cancerous)	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1	...	...	...	1	1	0·00
Other Diseases of the Female Genital Organs	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	3	3	1	0·01
Paget's Disease	...	...	...	...	...	...	...	...	...	...	...	...	...	1	...	...	...	1	1	0·00
VII.—The Puerperal State.																				
Accidents of Pregnancy, Abortion, etc.	...	...	...	...	...	...	...	...	...	...	2	...	1	...	...	...	...	3	3	0·01
Puerperal Hæmorrhage	...	...	...	...	...	...	...	...	...	1	1	...	...	...	...	...	...	2	2	0·01
Other Accidents of Childbirth	...	...	...	...	...	...	...	...	...	...	2	...	...	...	...	...	...	2	2	0·01
Puerperal Fever	...	...	...	...	...	...	...	...	...	...	2	...	...	...	...	...	...	7	7	0·03
Puerperal Albuminuria and Convulsions	...	...	...	...	...	...	...	...	...	...	3	...	...	...	...	...	...	3	3	0·01
VIII.—Diseases of the Skin and of the Cellular Tissue.																				
Senile Gangrene	...	...	...	...	...	...	...	...	...	...	...	...	1	...	2	1	3	1	4	0·02
Gangrene, other types	...	...	...	...	...	...	...	...	...	...	...	...	...	1	1	1	1	2	3	0·01
Phlegmon, Acute Abscess	...	...	...	...	1	...	...	...	...	...	...	...	1	...	2	...	2	2	4	0·02
Ulcer, Bedsore	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1	1	2	1	3	0·01
Eczema	...	...	2	...	...	...	...	...	...	...	...	...	...	...	...	...	2	...	2	0·01
Pemphigus	...	...	1	...	...	...	...	...	...	...	...	...	...	...	...	...	1	...	1	0·00
Other Diseases of Integumentary System	...	...	3	...	...	...	...	...	...	...	...	...	...	1	...	...	3	1	4	0·02
IX.—Diseases of the Bones and of the Organs of Locomotion.																				
Diseases of the Bones	...	...	...	...	...	...	...	...	...	...	...	...	1	1	...	1	1	2	3	0·01
X.—Malformations																				
Congenital Malformations :—	...	...	...	1	...	...	...	...	...	...	...	...	...	...	...	...	...	1	1	0·00
Congenital Hydrocephalus	...	...	1	3	...	...	...	...	...	...	...	...	...	...	...	...	1	3	4	0·02
Congenital Malformation of Heart	...	...	1	...	1	...	...	...	...	...	...	...	...	...	...	...	1	1	2	0·01
Other Congenital Malformations	...	...	4	4	...	1	...	...	...	...	...	...	...	...	...	...	5	4	9	0·04
XI.—Diseases of Early Infancy.																				
Premature Birth	...	...	36	29	...	...	...	...	...	...	...	...	...	...	...	...	36	29	65	0·35
Infantile Debility, Icterus, and Sclerema	...	...	26	22	...	...	...	...	...	...	...	...	...	...	...	...	26	22	48	0·25
Infantile Atrophy, Debility, and Marasmus	...	...	2	1	...	...	...	...	...	...	...	...	...	...	...	...	2	1	3	0·01
Want of Breast Milk	...	...	...	1	...	...	...	...	...	...	...	...	...	...	...	...	...	1	1	0·00
Other Diseases peculiar to Early Infancy :—																				
Atelectasis	...	...	2	...	...	...	...	...	...	...	...	...	...	...	...	...	2	...	2	0·01
Injuries at Birth	...	...	...	4	...	...	...	...	...	...	...	...	...	...	...	...	...	4	4	0·02
Lack of Care	...	...	1	1	...	...	...	...	...	...	...	...	...	...	...	...	1	1	2	0·01
XII.—Old Age.																				
Senile Dementia	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1	3	1	3	4	0·02
Senile Decay	...	...	...	...	...	...	...	...	...	...	...	...	...	...	83	121	83	121	204	1·10
XIII.—Affections Produced by External Causes.																				
Suicide	...	...	...	...	...	...	...	...	...	...	1	7	...	2	1	...	1	9	3	12	0·06
Violence	...	3	4	1	...	4	1	9	2	16	1	25	5	22	3	11	9	91	25	116	0·62
XIV.—Ill-defined Causes.																				
Syncope (aged 1 and under 70)	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	2	1	3	0·01
Heart Failure (aged 1 and under 70)	...	...	...	...	...	...	2	1	...	1	...	...	3	1	...	1	5	4	9	0·04
Other Ill-defined Causes	...	...	...	...	...	...	...	...	...	...	...	...	1	...	...	...	1	...	1	0·00
All Causes	...	...	221	171	57	46	43	44	55	56	72	81	211	172	363	233	361	360	1383	1163	2546	13·7